

Running head: HOUSE SPARROW DISPLACEMENT

House Sparrow Displacement of other Bird Species

Phil Kahler

Cornell Lab of Ornithology

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Jennifer Fee

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Introduction

In the autumn of 1994 students, parents and friends of Tualatin Valley Junior Academy (TVJA) built a bird blind. The structure provides a sheltered area large enough to seat a class of 25 students out of the weather from which to observe birds visiting our feeding station. During the 1996-1997 school year my students and I began collecting bird observation data for the Classroom FeederWatch program developed by Cornell Lab of Ornithology. Twelve years later we continue to collect bird data and are enthusiastic participants in the new BirdSleuth program. Over the past twelve years we have noticed significant shifts in the bird population visiting our feeders and have witnessed extraordinary changes to the local environment.



Our feeder area and bird blind (top left). Students seated inside the bird blind (top right). Students collecting bird observation data (bottom left and right).

During the first three years of data collection our most populous species was the Dark-eyed Junco, *Junco hyemalis*. House Sparrows, *Passer domesticus*, also known as English Sparrows had never been observed at our feeding station. Throughout the 1999 – 2000 school year we then saw a dramatic drop in the Dark-eyed Junco population and experienced a huge influx of House Sparrows. The effect was impressive enough to catch the attention and concern of nearly all of my students. Why was this happening? Was it a coincidence? Did the construction of houses and the loss of the field behind our school have something to do with this change? Were the House Sparrows driving away the Juncos?



Aerial photo showing the rural landscape around our school in 1996 (left) and the suburban development around the school in 2002 (right). The yellow star marks the approximate location of our bird blind.

In 2002, Kristina, one of my 10th grade students, wrote a paper for Classroom Birdscope in which she concluded the recent housing development was the cause, as other Oregon FeederWatch schools were not experiencing declines in their Junco populations during the same

time period (Kristina, 2002). In 2007, Nick, one of my 7th grade students, followed up with a paper that concluded the arrival of House Sparrows to our feeders was related to the recent and ongoing construction and development around our school (Nick, 2007). Although both Kristina and Nick made some brilliant discoveries during their search for answers, I have wondered if there wasn't something more going on between the House Sparrows and Dark-eyed Juncos. I have also wondered whether other species visiting our feeders were experiencing similar declines even though they might be less obvious. Because the data on my graphs seemed to show a direct relationship between the arrival of House Sparrows and the decline of Dark-eyed Juncos (Kahler, 2001) I wondered whether the House Sparrows were having the same effect on other birds. Do House Sparrows displace other bird species from our feeder area? I hypothesized that, "If House Sparrows are competing with other bird species for available habitat resources, then over time I will observe an increase in the House Sparrow population and a decrease in the populations of other bird species visiting my feeders." Thus my independent variable in this study is the increasing presence of House Sparrows. My dependent variable is an observable drop in other bird populations.

According to Gibbons and Strom, House Sparrows were released in the eastern United States during the 1850's over the course of several events. Reasons why the Sparrows were released are not entirely clear (Gibbons & Strom, 1988). Some sources suggest that the birds were released to control insects even though House Sparrows are mainly seed eaters, while Baughman credits "The success of the House Sparrow in North America... (as) the result of a deliberate introduction around 1850 into New York's Central Park, where bird lovers hoped that 'all the birds mentioned in Shakespeare's plays' might flourish in a kind of open-air zoo" (*Reference atlas to the birds of North America*, 2003, p. 420). Regardless of the reason why these Sparrows were released, the result was a quick and dramatic establishment of an invasive species across the North American continent.

Terres notes that House Sparrows like to nest and live around human structures. As primarily seed eaters these Sparrows are able to find food left behind by human activity. Further documentation indicates that House Sparrows demonstrate aggressive behavior toward native birds when competing for food, such as stealing worms right out of the bills of the much larger American Robin (Terres, 1982). Together with the Starling, House Sparrows are credited with driving off Eastern Bluebirds from their nesting cavities (Gibbons & Strom, 1988). In all it has been documented that House Sparrows attack and aggressively force out at least 70 different bird species from their nest cavities (Lowther & Cink, 2006). Clearly House Sparrows have a bad reputation for being aggressive and may indeed have a negative effect on other bird species.

Materials and Methods

Our bird blind and feeding station are located in the woods behind our school in Hillsboro, Oregon, just west of Portland. The wooded area is part of a narrow green space that flanks both sides of Downy Creek, which contains water year around. Red Alder, Big Leaf Maple, Western Red Cedar and Douglas Fir comprise the bulk of this mixed deciduous – coniferous forest. Like so many areas in the Pacific Northwest much of the native understory is losing its battle with invasive Himalayan Blackberry and English Ivy.

Over the years we have maintained six hopper-type feeders elevated on poles, three elevated covered platform feeders, one platform feeder on the ground, one hanging tube type feeder, and three suet feeders on trees. Throughout the school year from September through May the feeders are filled with black-oil sunflower seed and a wild songbird seed mix. Occasionally we also hang out pinecones covered in a peanut butter, flour & seed mix. Thistle feeders have also been used sporadically. When temperatures approach or are below freezing it is not unusual for the birds to consume 80 – 100 pounds of seed in one week.

My students and I have a well established routine for visiting our feeders to gather data. Before leaving the classroom we record current weather data from our school's weather station,

which many students use for their own bird research. Upon arrival and once we are quietly seated we record our start time and begin the count. All data is carefully recorded on our tally sheet (see appendix 1). We follow the count methods outlined in the Classroom FeederWatch curriculum so the risk of counting one individual bird more than once is minimized (*Classroom FeederWatch: Students and scientists working together*, 1998, p. W.88). Using whole Arabic numbers, not tally marks, we record the greatest number of each species that we can see at one time. For example, if we see five Dark-eyed Juncos, then the number 5 is marked on our tally sheet on the line for Dark-eyed Juncos. As time passes the Juncos may come and go, but if we cannot see any more than five of them at one time, we can only record a 5 on the tally sheet. However, if three more Juncos arrive and join the five already in view, we can put a line through the 5 and write down 8, since we can now see a total of eight Juncos all at once. Eight is the greatest number of Juncos observed and is the only number we can use, so it is circled. We cannot add the eight to the original five or we risk counting some individuals more than once, even though we may suspect the Junco population to be greater.

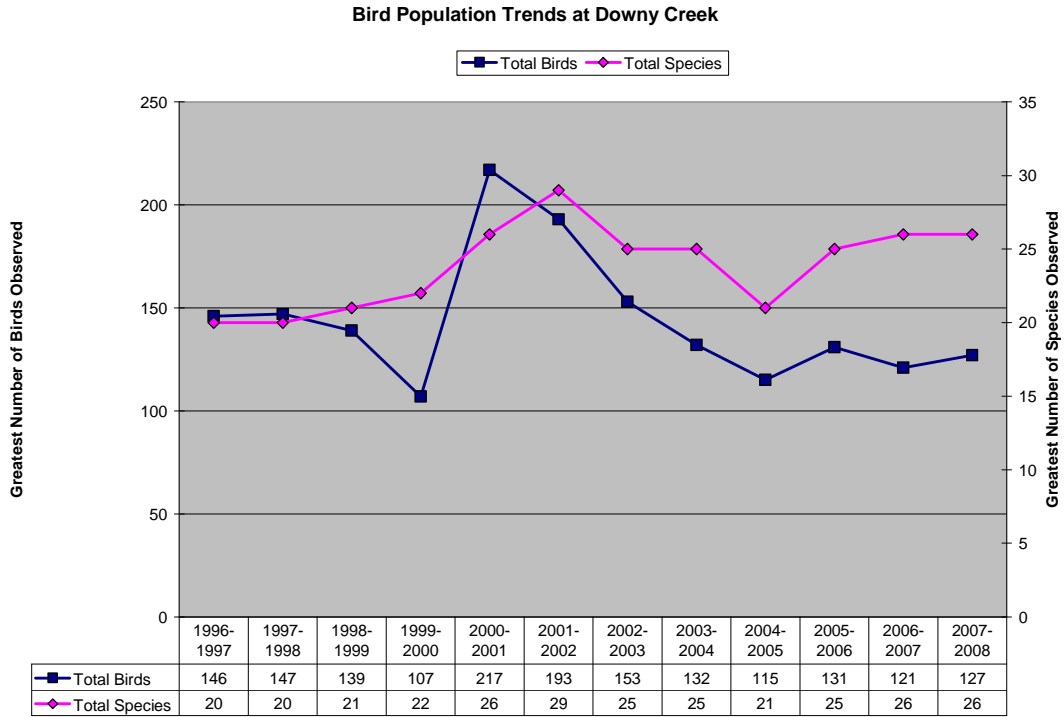
Each school year we collect our data during the months of November through March. Generally I try to get each of my classes out to the bird blind at least once each week for 20-30 minutes. Sometimes we get out more than one time in a week, and more often than not we are out only for 10-15 minutes. Since I go out with each class, I end up with much more data than my students. The data used in this study is the culmination of twelve years of data that I personally collected each time I took a group of students out to the feeding station. Throughout the twelve years of this study my students and I have had full access to field guides to help us with bird identification. Though I have used my personal binoculars throughout this data collection, my students have only had full access to binoculars for the last two years.

Data recorded on my tally sheets was eventually entered into spread sheets using Microsoft Excel for all twelve school years from 1996 – 2008 (see appendix 2 for data tables). I

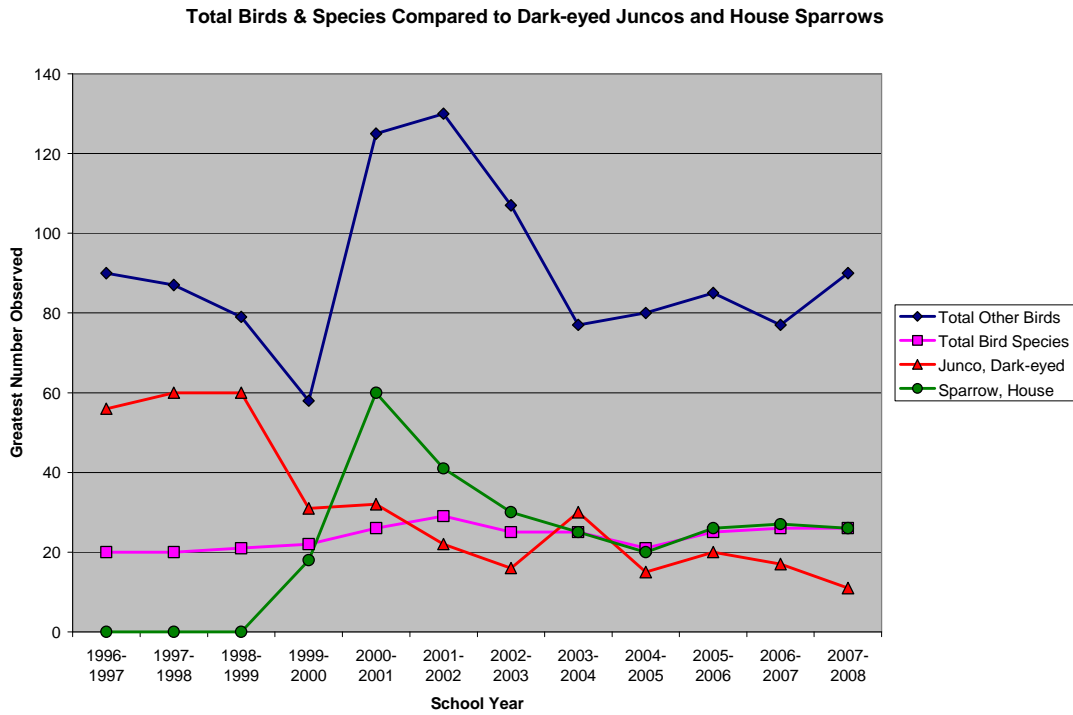
then took the largest number observed at one time for each bird species and entered this data into a separate Excel file so I could track population trends from year to year (see table 1: Bird Population Trends from 1996-2008). Using this data I was then able to generate a number of different graphs to shed some light on my questions about bird population trends at our feeders. It should be noted that during this time we observed and identified thirty-seven different species in our immediate feeder area out of about fifty-six species observed around the school campus. I created graphs to make comparisons between only those species we see regularly at the bird blind.

Results and Analysis

Graph 1 shows a comparison of the total number of bird species and total number of individual birds observed over the last twelve years. It appears that species diversity and population size are related, as the ups and downs mirror each other from year to year. In other words, during years we observed a greater number of species we also saw a greater number of individual birds. I wanted to see what would happen if I took out the numbers for House Sparrows and Dark-eyed Juncos and graphed them out separately to compare with the remaining numbers for bird species and individuals (see graph 2). Here you can see that the same year the House Sparrow population exploded (2000-2001) we also saw a huge increase in other individual birds, and a small increase in observed species. Again, the rises and dips of this line graph seem to mirror each other for many of the years.

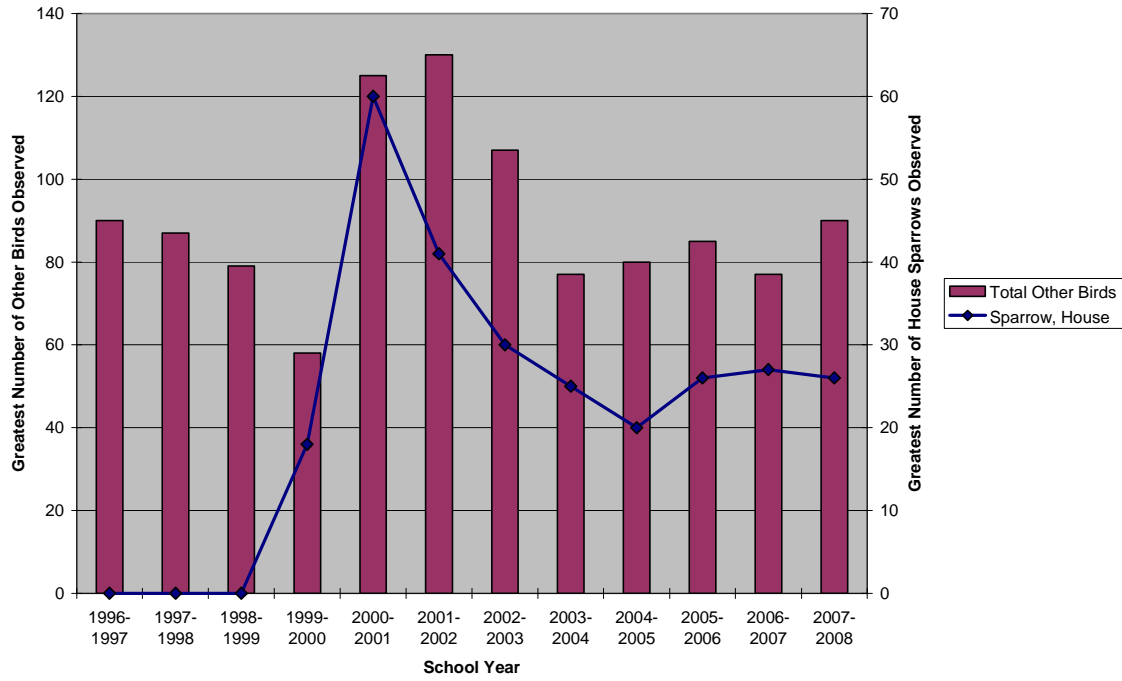


Graph 1



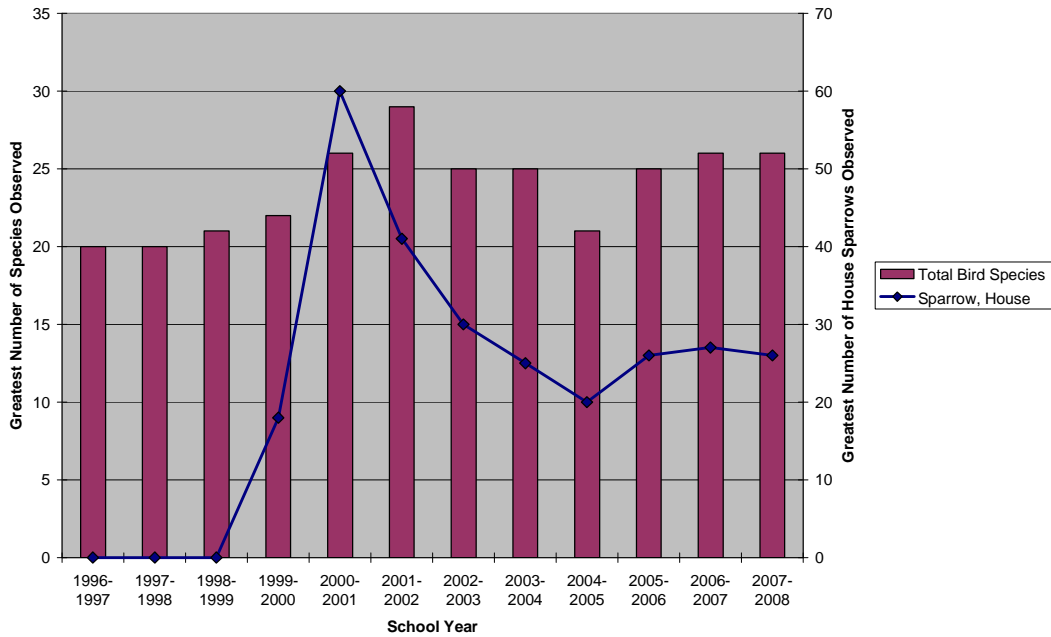
Graph 2a

Total Population of Other Birds Compared to House Sparrow Population



Graph 2b

Total Number of Bird Species Compared to House Sparrow Population



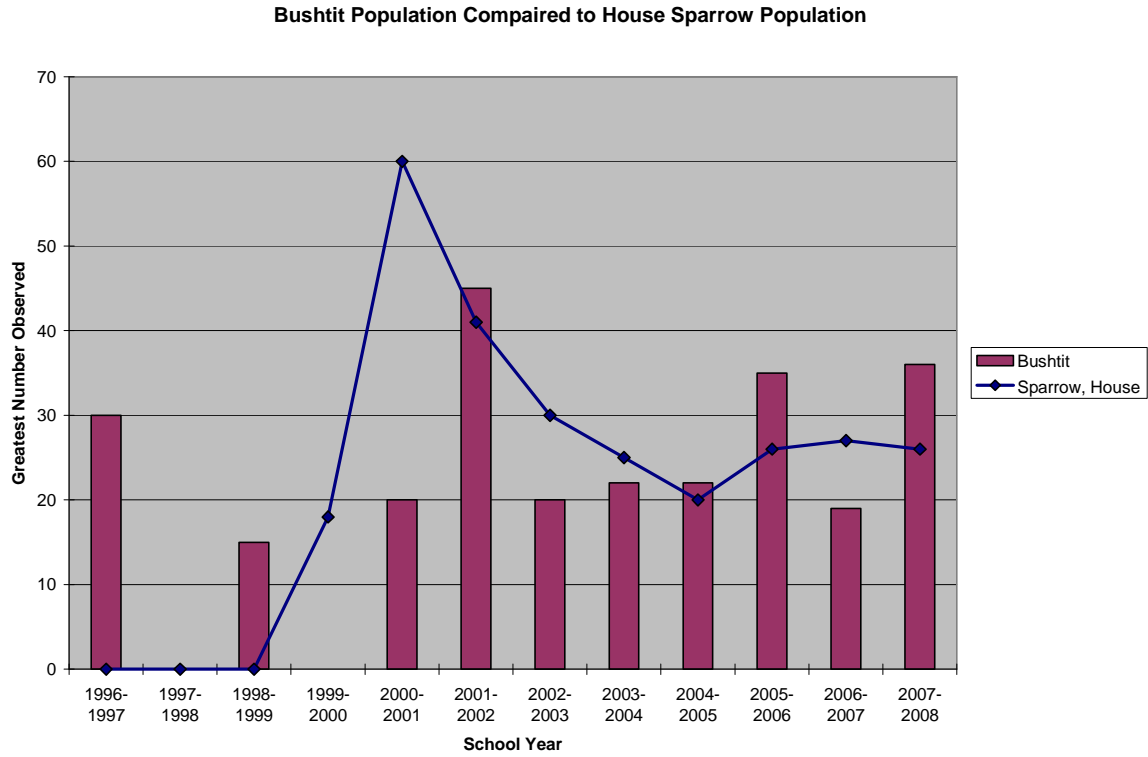
Graph 2c

For graphs 3 – 23 you will see that I created combination graphs showing a line for the House Sparrow population and bars for the indicated species. I did this to help the viewer avoid confusion between the two species being graphed. I wanted to better see how the rises and dips in population size compared between the two species, so in most of the graphs you will see the larger House Sparrow scale on the Y-axis to the right, and a smaller scale Y-axis for the specified species on the left.

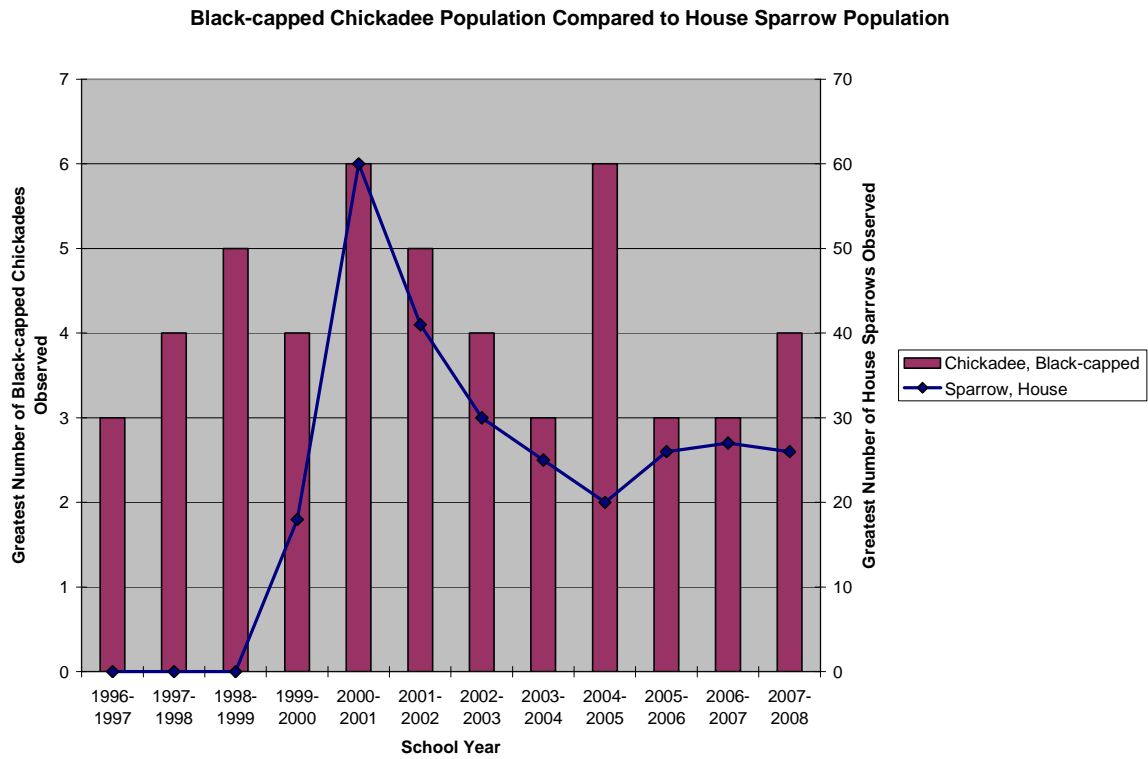
An analysis of this collection of graphs, reveals that most of the bird species are responding to the same ups and downs that are affecting the House Sparrow population. After the initial House Sparrow population explosion observed in 2000-2001, many of our bird species seem to be on the decline, including the House Sparrow. These results indicate that the House Sparrows are not necessarily the mechanism responsible for the decline of other populations because they are also showing similar downward trends.

I believe the following species are doing well and are either holding their own or are on the increase at our feeders: Bushtit (graph 3), Black-capped Chickadee (graph 4), Chestnut-backed Chickadee (graph 5), Red-breasted Nuthatch (graph 11), American Robin (graph 12), Golden-crowned Sparrow (graph 15), Song Sparrow (graph 16), Varied Thrush (graph 18), Spotted Towhee (graph 19), Townsend's Warbler (graph 20), Yellow-rumped Warbler (graph 21), Downy Woodpecker (graph 22), and Bewick's Wren (graph 23). It should be noted that observation data for Townsend's Warblers and Yellow-rumped Warblers does not exist for the first three years of the study due to my lack of experience in identifying warblers when I began.

Unfortunately the data seems to indicate the following species may be in trouble in our area: Morning Dove (graph 6), House Finch (graph 7), Western Scrub Jay (graph 8), Steller's Jay (graph 9), Dark-eyed Junco (graphs 10a and 10b), Pine Siskin (graph 13), and Fox Sparrow (graph 14). European Starlings (graph 17) also appear to be on the decline here.

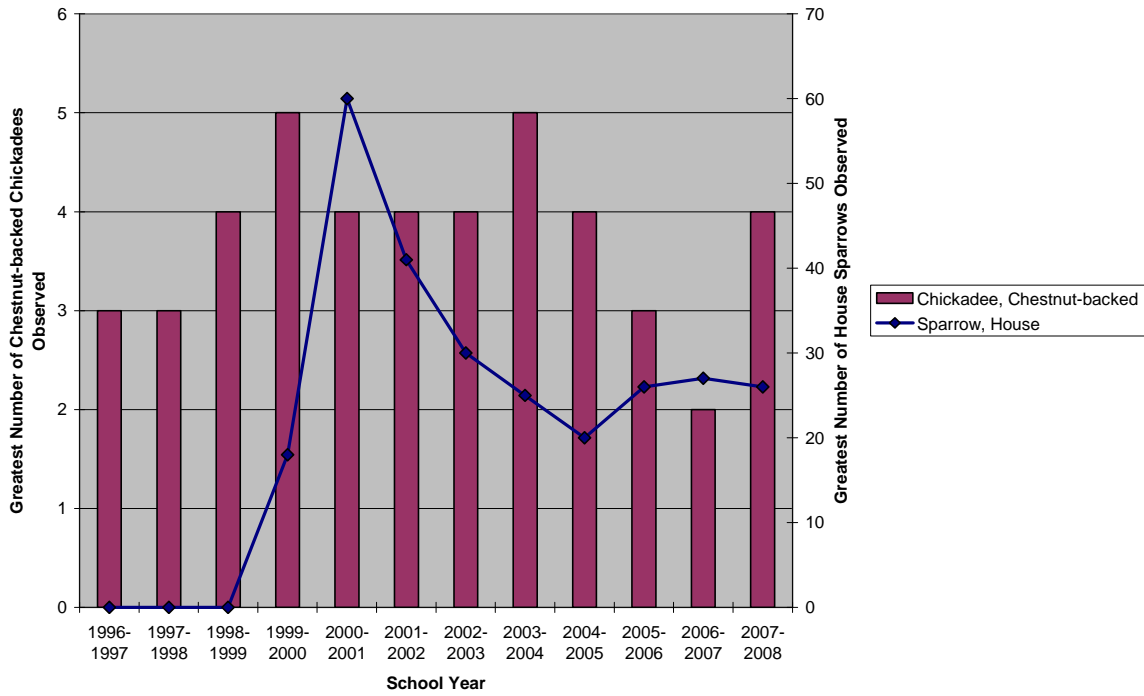


Graph 3



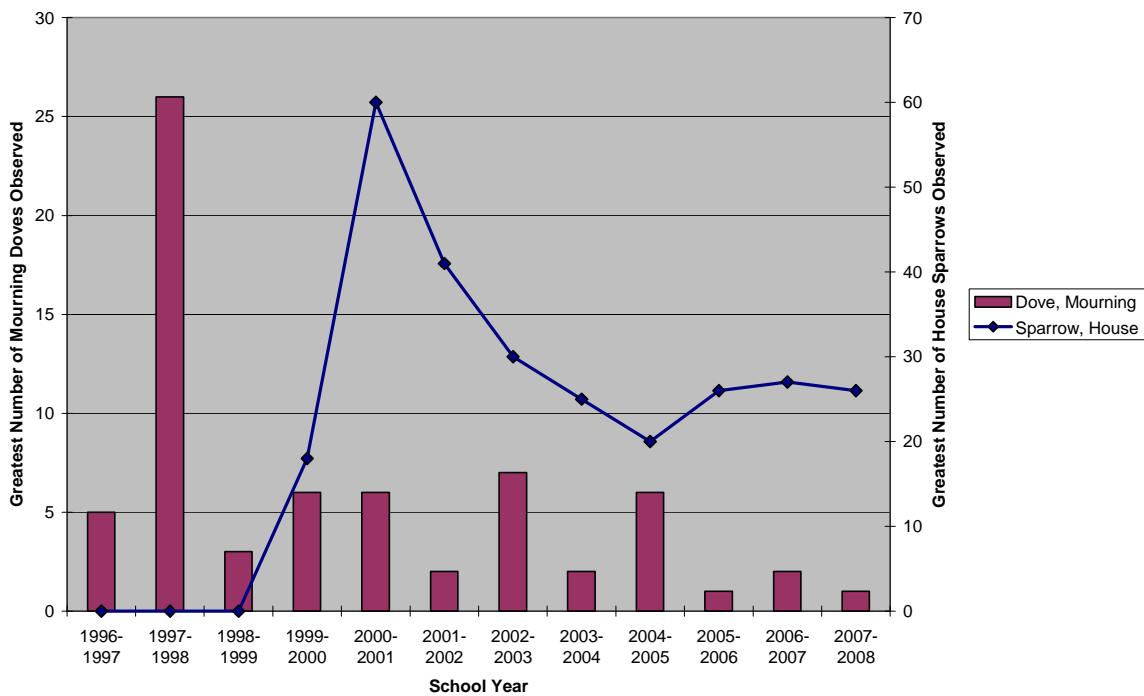
Graph 4

Chestnut-backed Chickadee Population Compared to House Sparrow Population



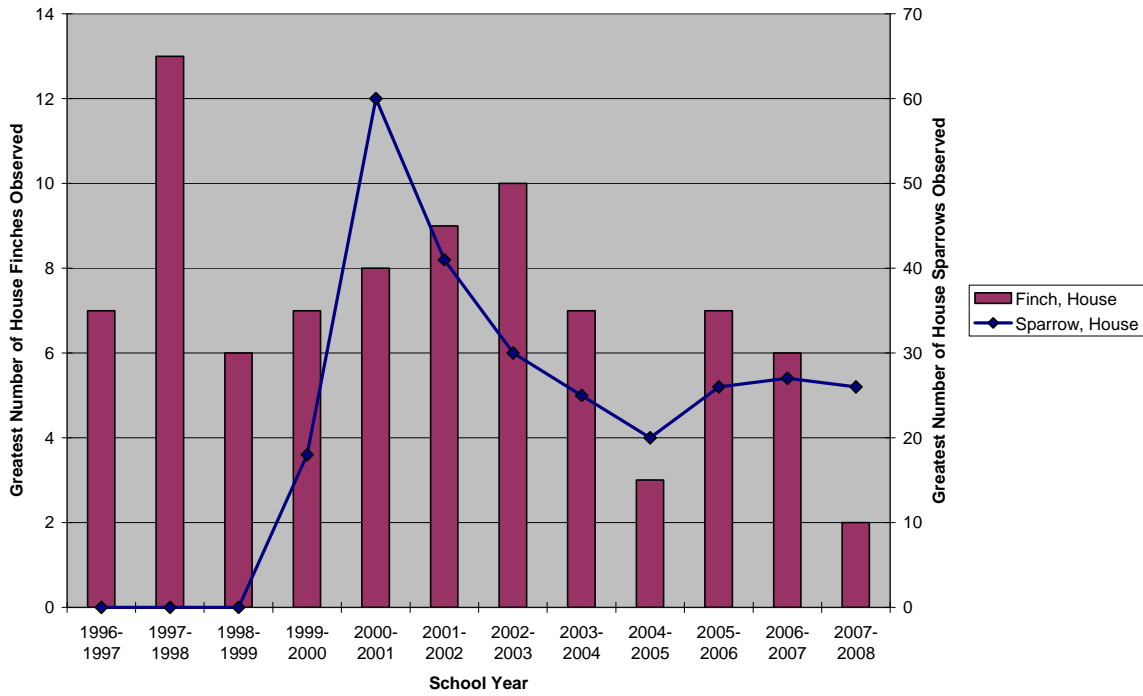
Graph 5

Mourning Dove Population Compared to House Sparrow Population



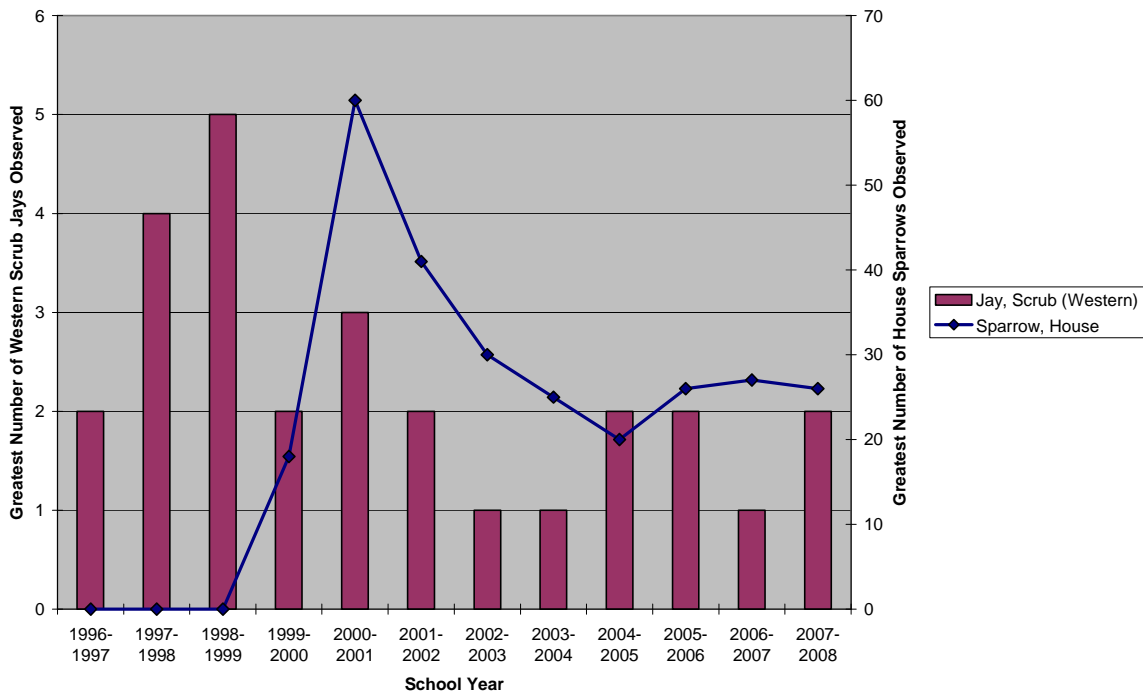
Graph 6

House Finch Population Compared to House Sparrow Population



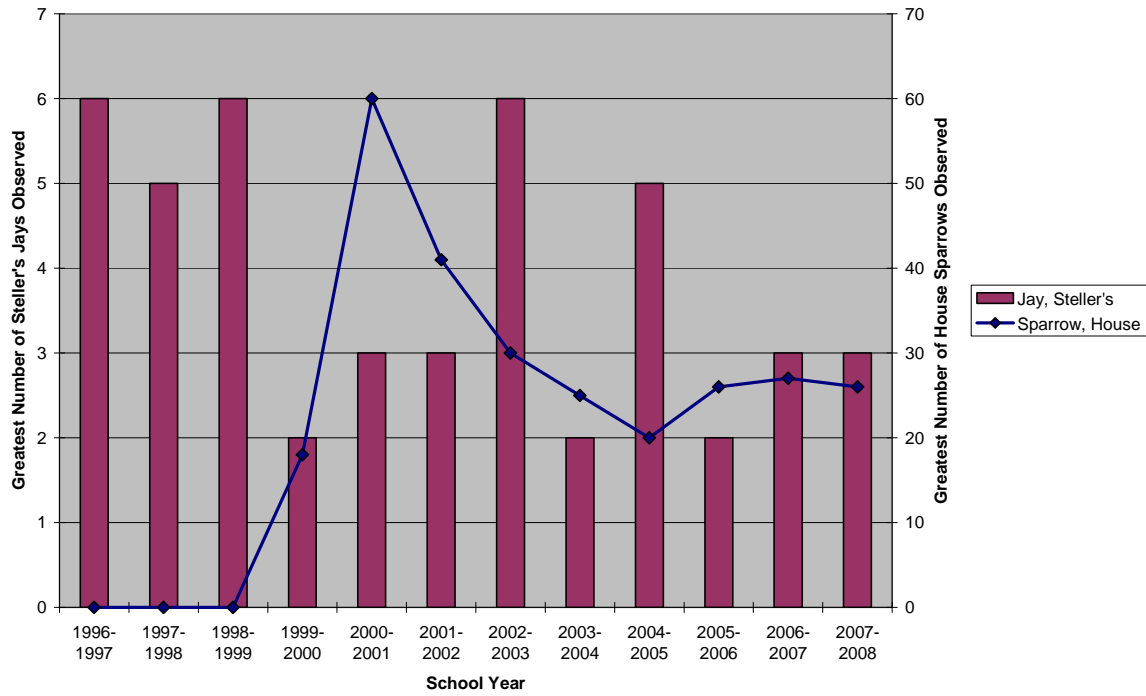
Graph 7

Western Scrub Jay Population Compared to House Sparrow Population



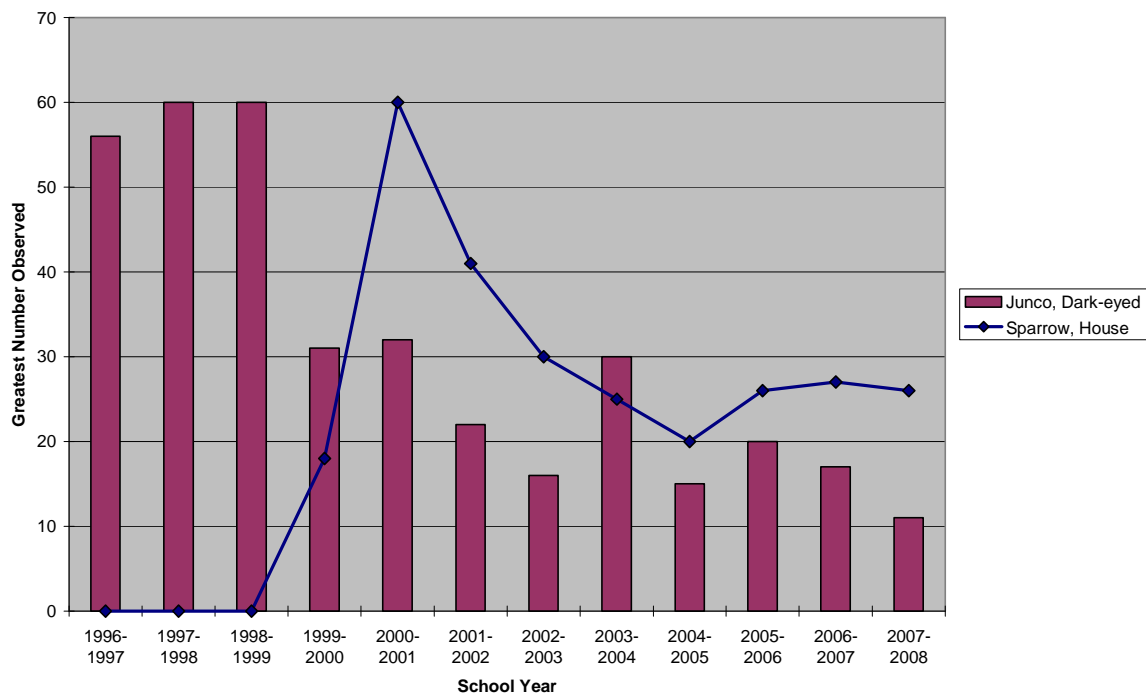
Graph 8

Steller's Jay Population Compared to House Sparrow Population

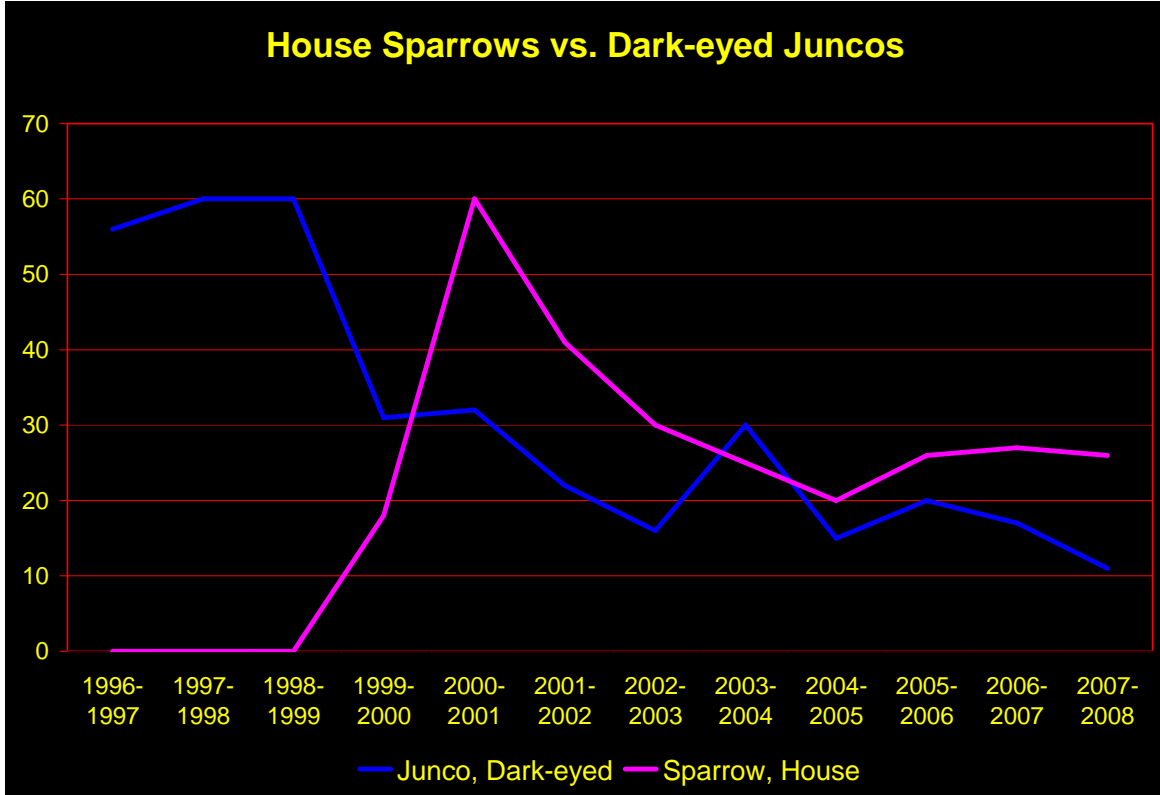


Graph 9

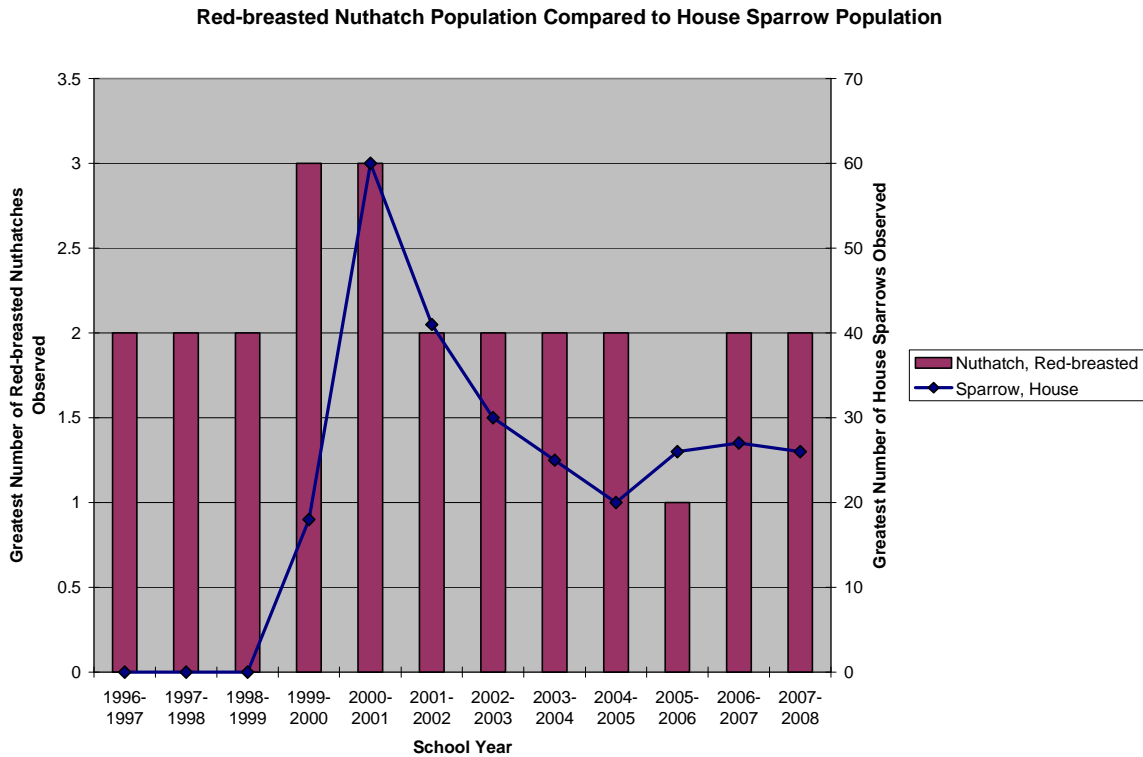
Dark-eyed Junco Population Compared to House Sparrow Population



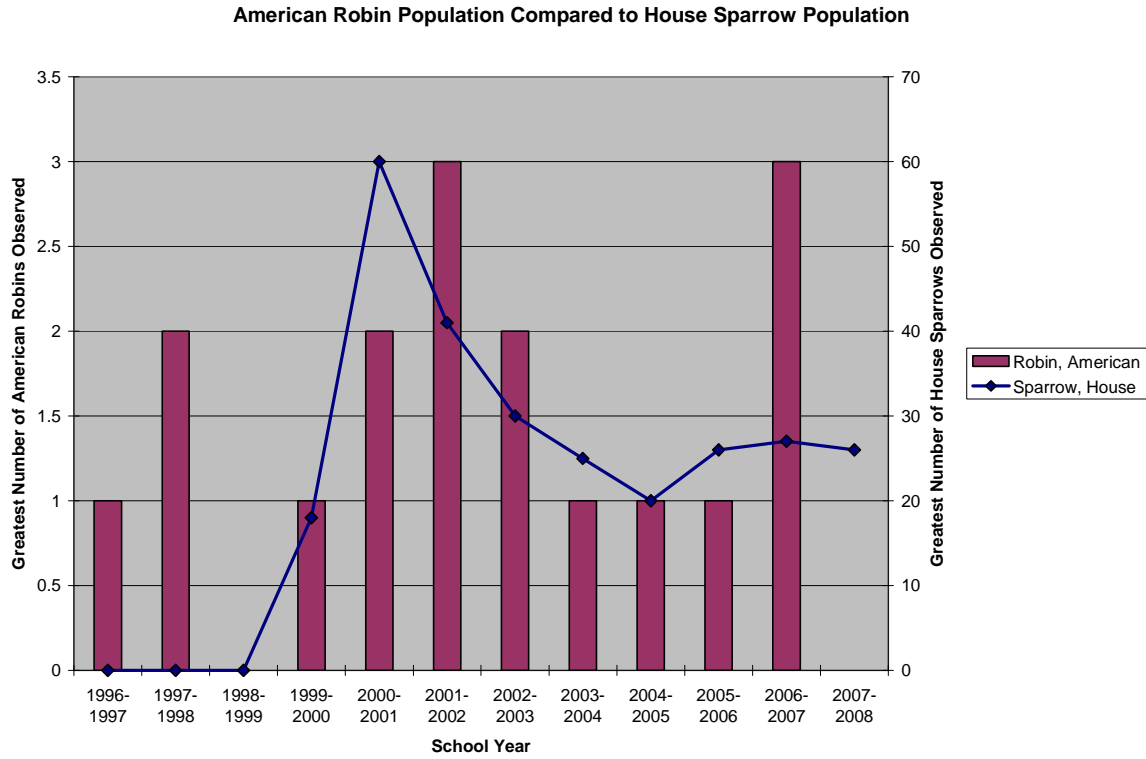
Graph 10a



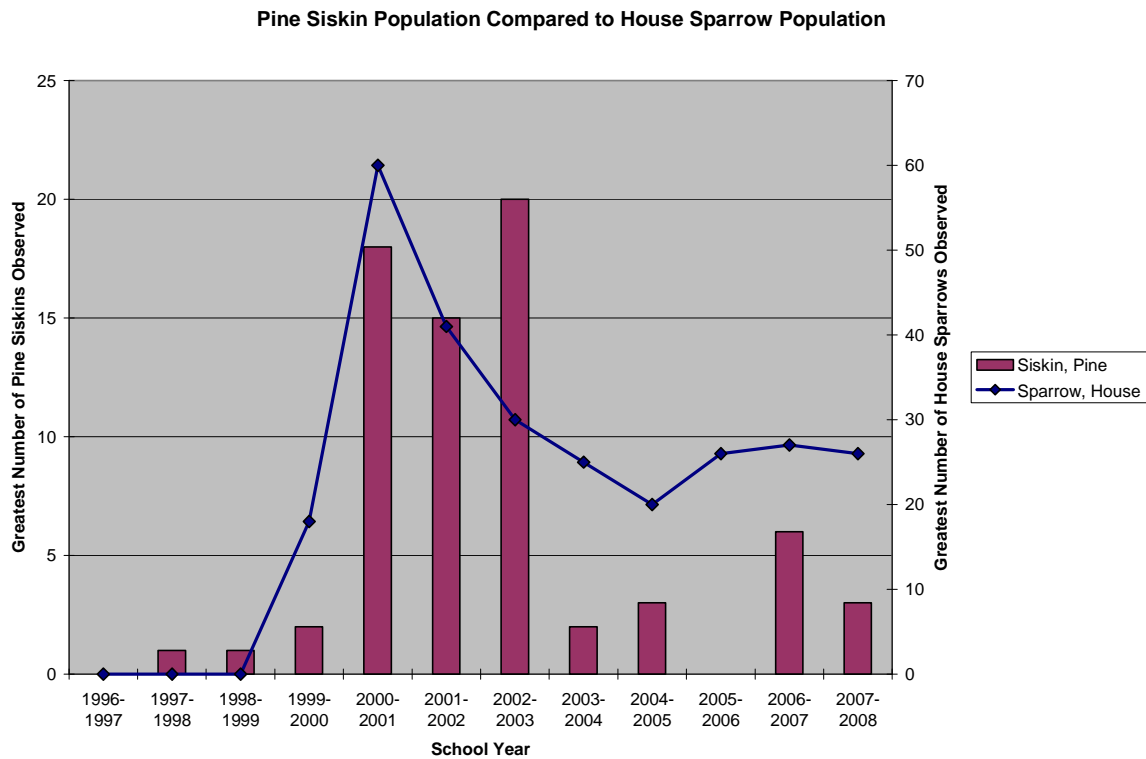
Graph 10b



Graph 11

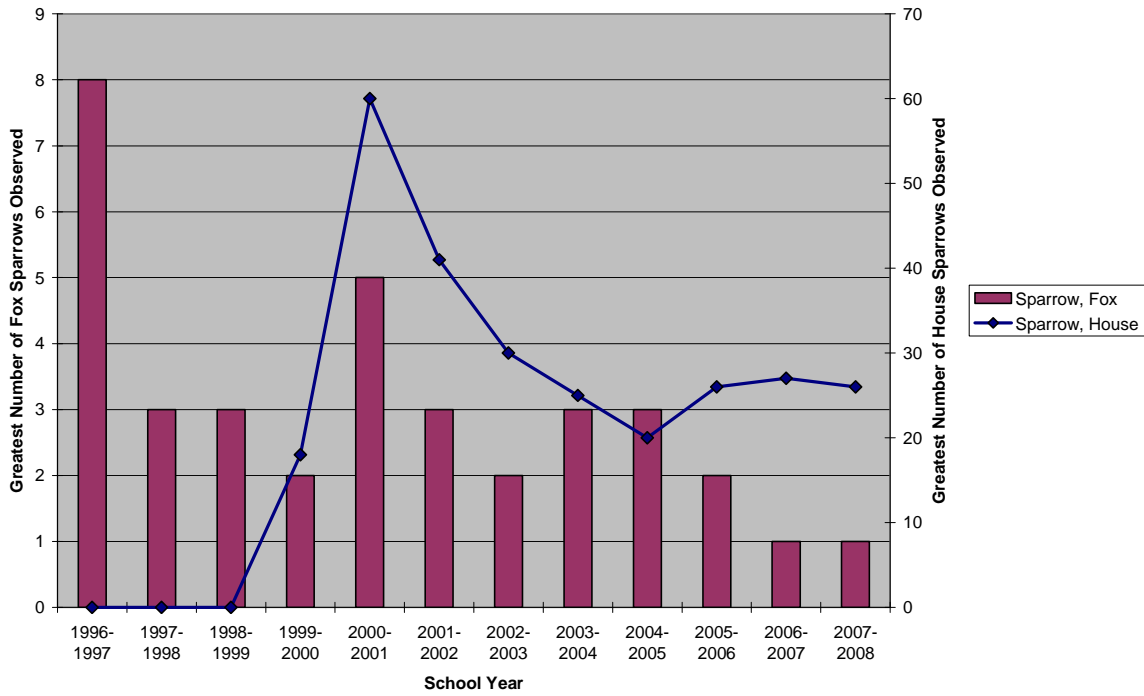


Graph 12



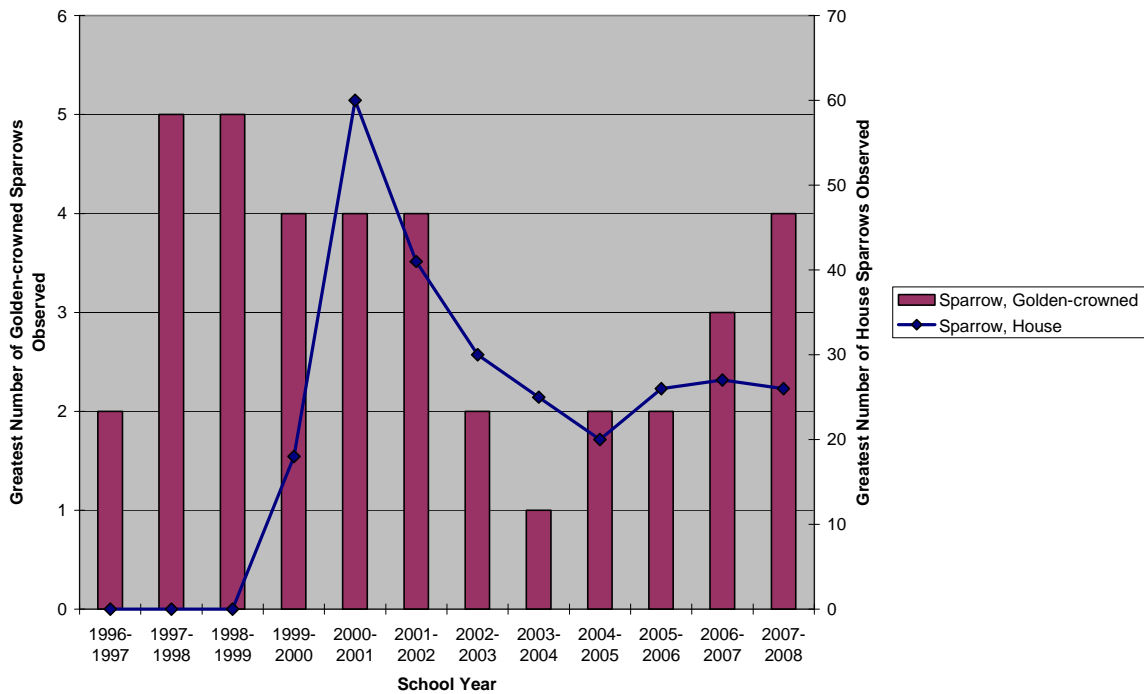
Graph 13

Fox Sparrow Population Compared to House Sparrow Population

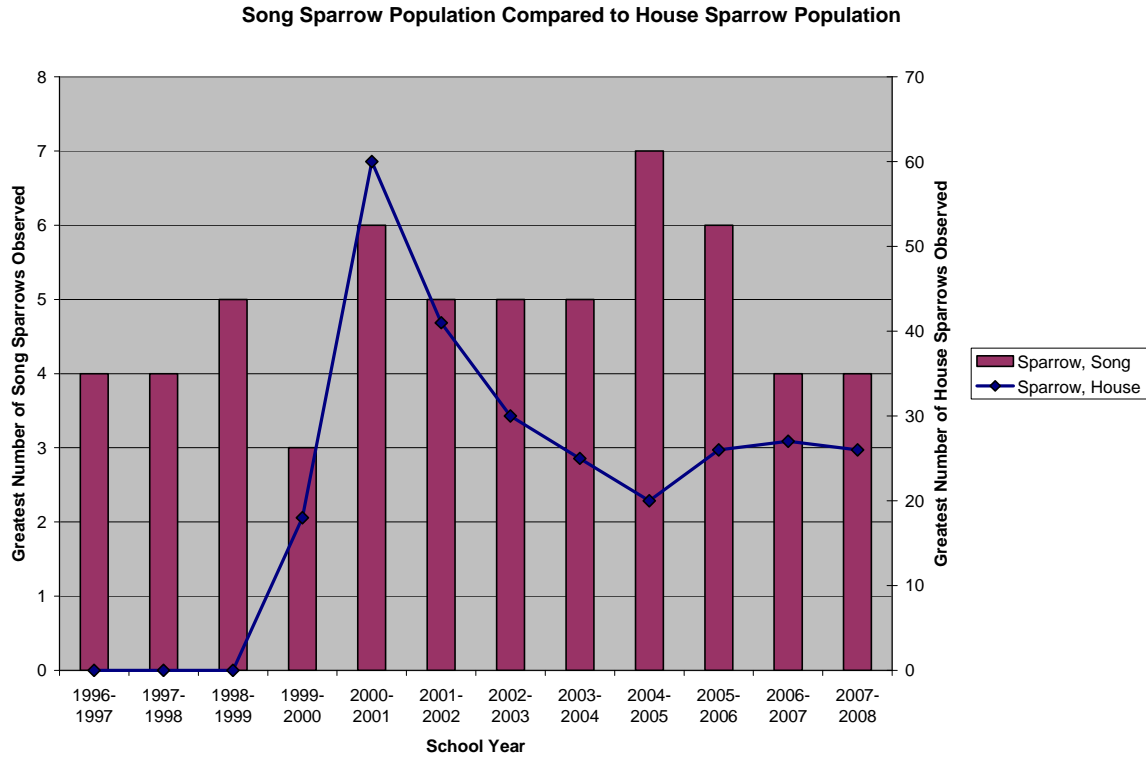


Graph 14

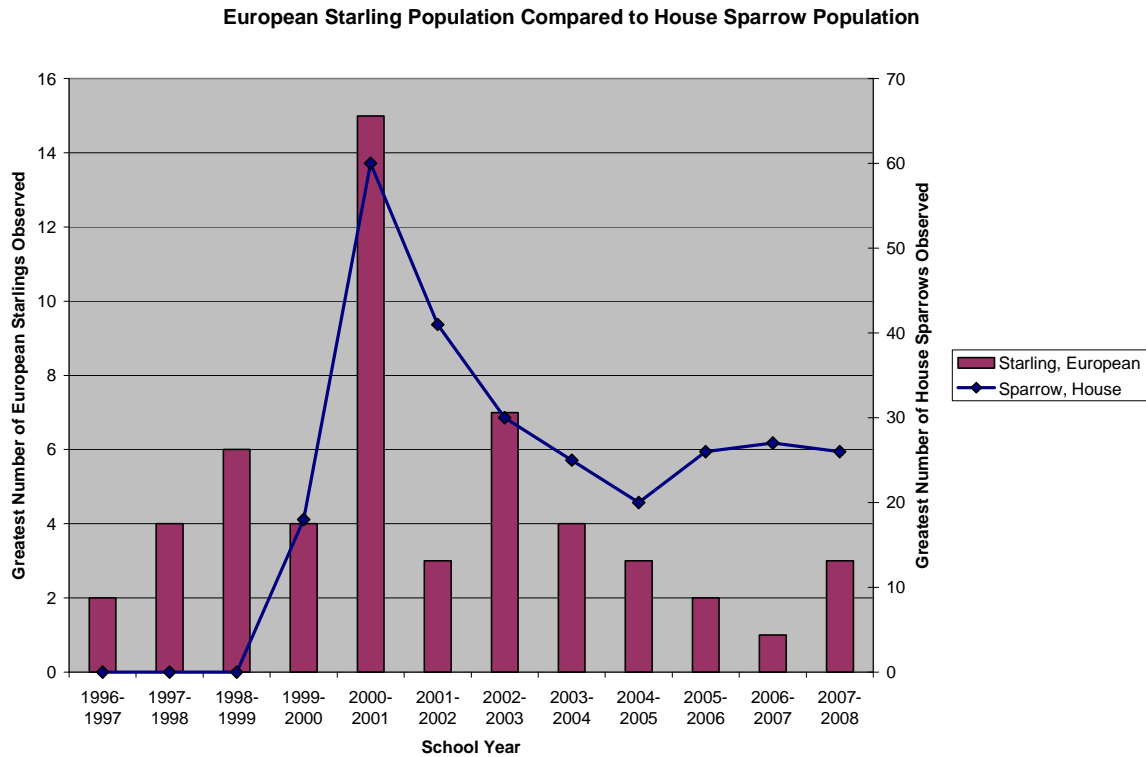
Golden-crowned Sparrow Population Compared to House Sparrow Population



Graph 15

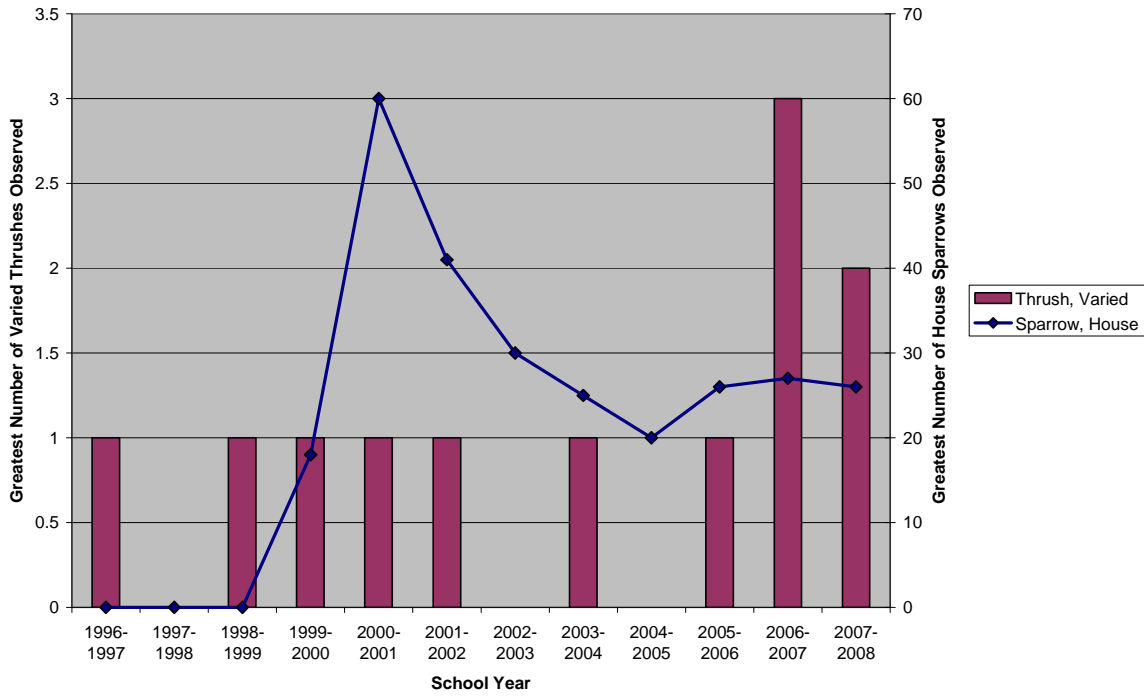


Graph 16



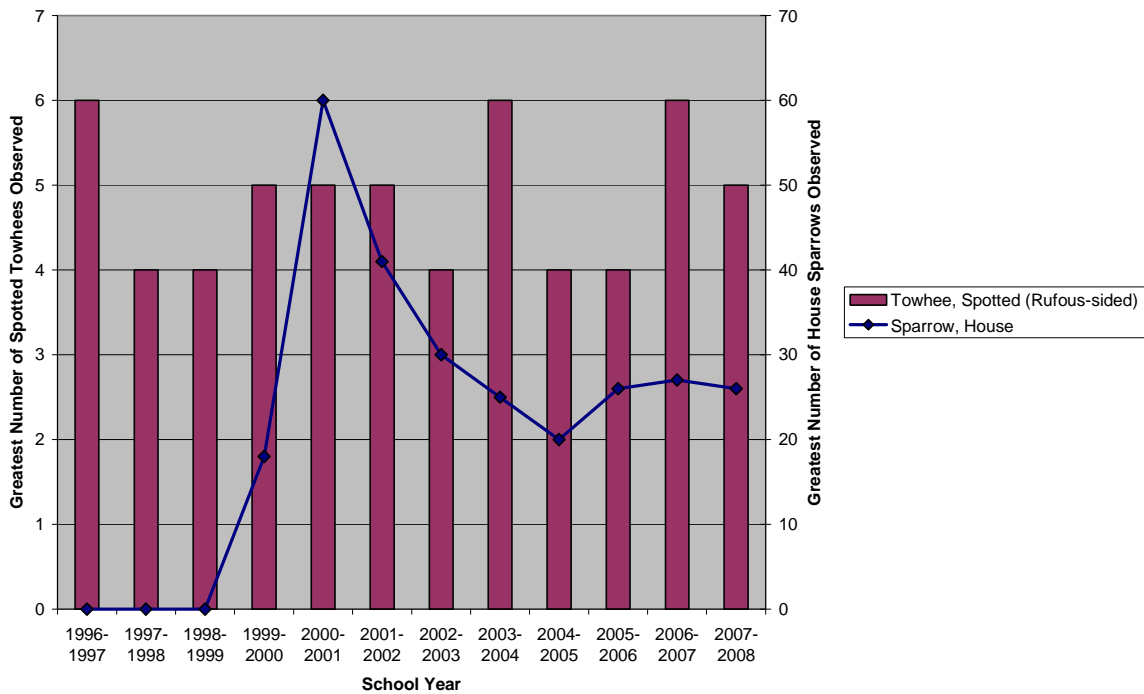
Graph 17

Varied Thrush Population Compared to House Sparrow Population



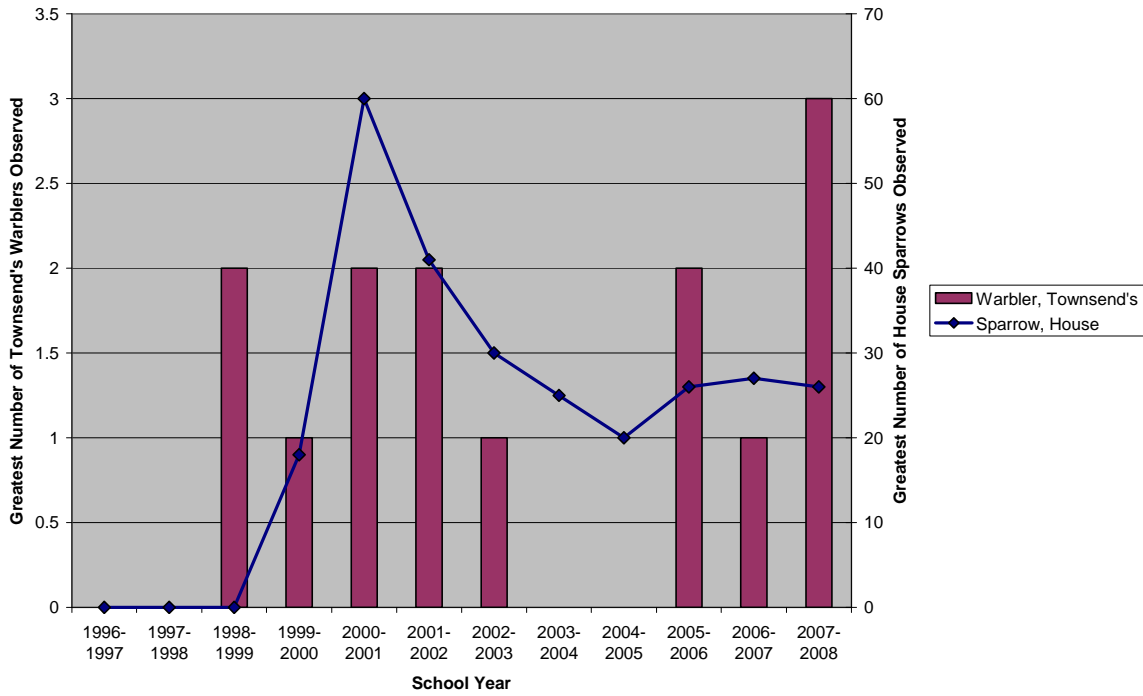
Graph 18

Spotted Towhee Population Compared to House Sparrow Population



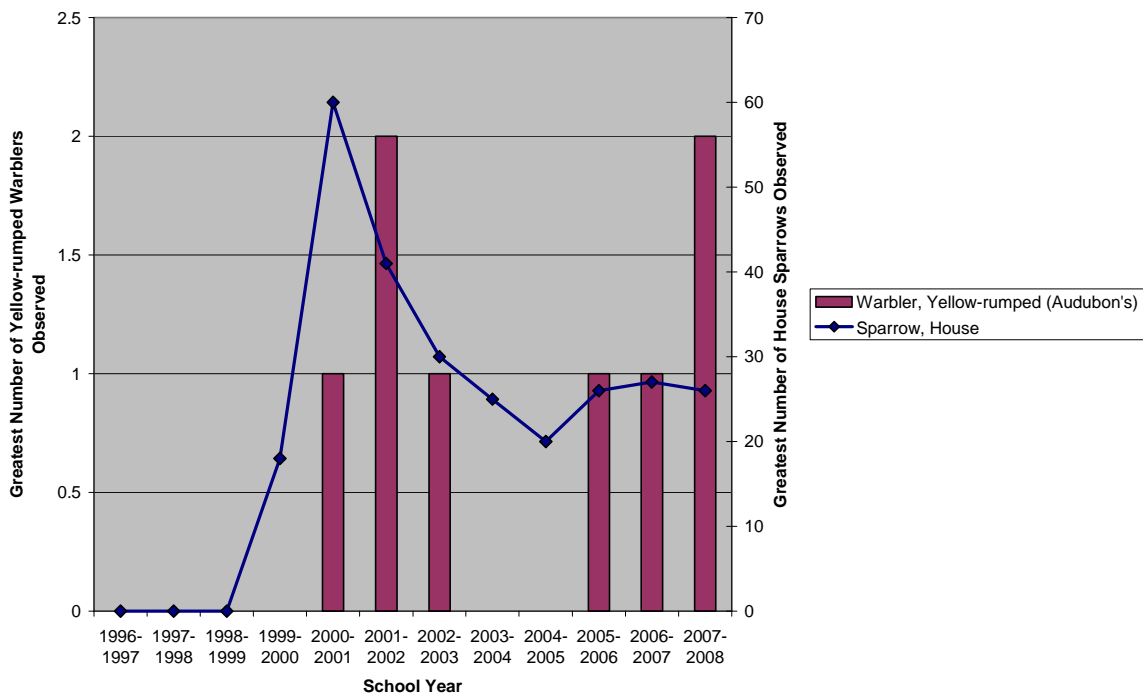
Graph 19

Townsend's Warbler Population Compared to House Sparrow Population

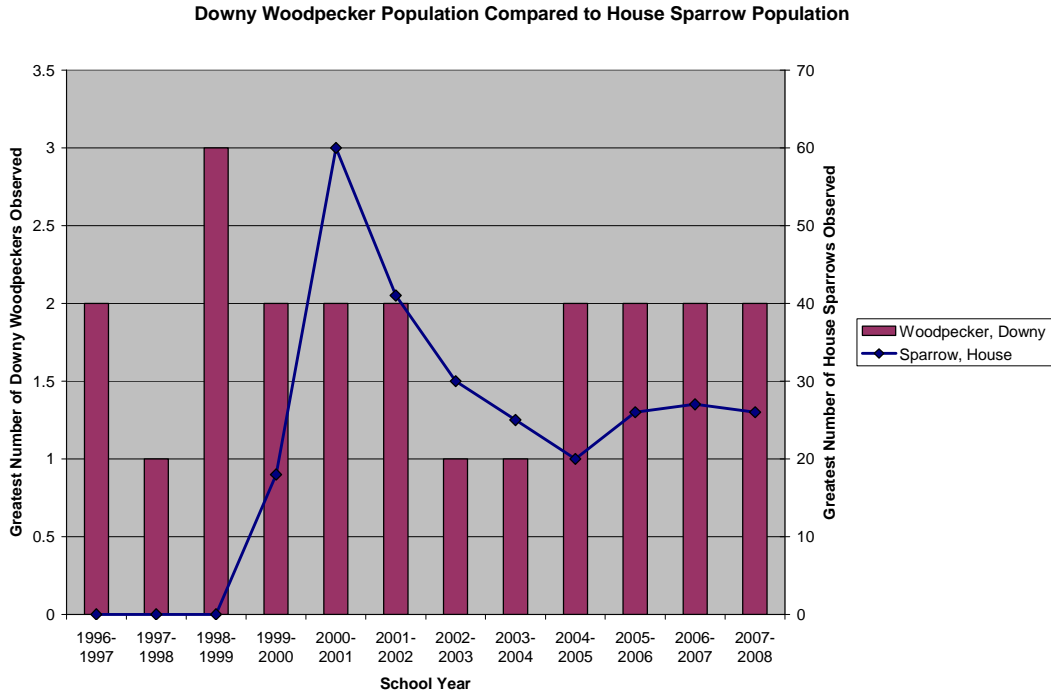


Graph 20

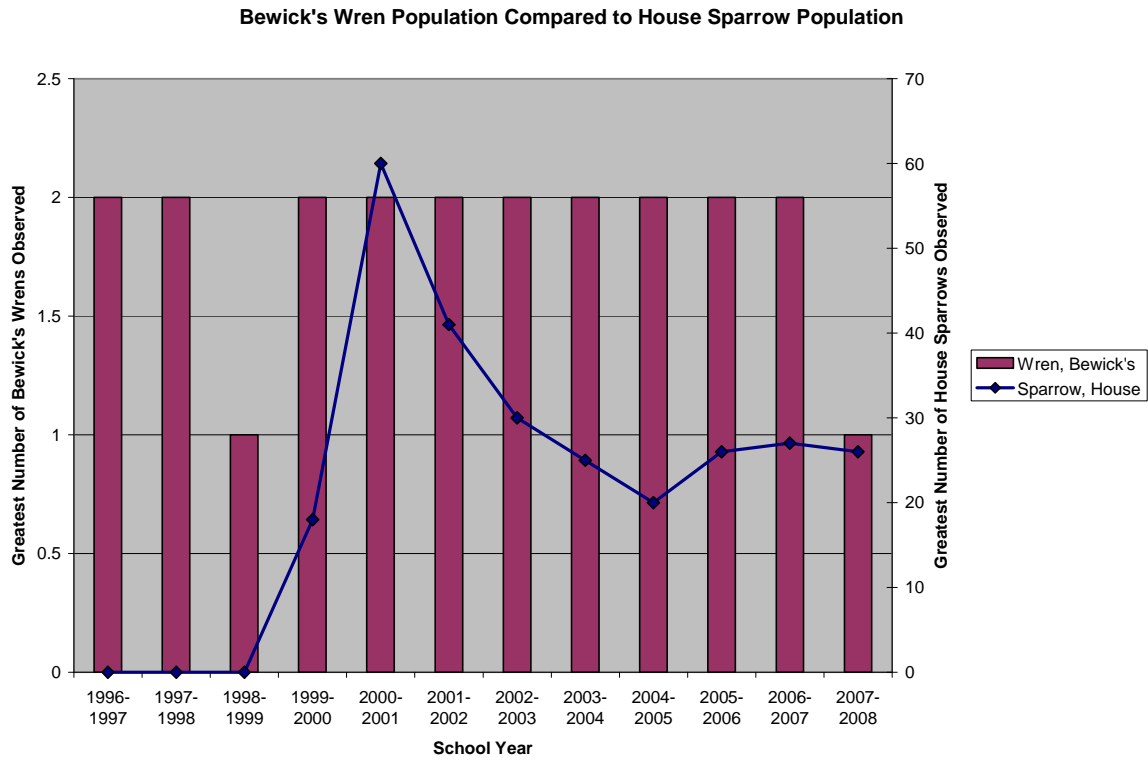
Yellow-rumped Warbler Population Compared to House Sparrow Population



Graph 21



Graph 22



Graph 23

Discussion and Conclusions

When the housing development replaced the field on the north side of Downy Creek behind our school I believe the House Sparrows moved in because the habitat had become ideal for their needs. Unfortunately, the Dark-eyed Juncos lost much of their needed habitat with this change. During the winter of 1999-2000 the nomadic Juncos did not find their favored foraging area along the margins of the fallow field and woods when they returned from their higher elevation haunts and likely moved on. Perhaps only the resident population of Juncos remained in our feeder area. Other possible explanations for the dramatic drop in the Junco population visiting our feeders may be related to temperature fluctuations in the high country, or whether or not Junco populations are influenced by what is known as a *mast year*, when huge quantities of tree seeds are produced and eaten (Dunn & Tessaglia-Hymes, 1999). Further historical studies should be conducted to determine whether or not either of these conditions coincided with our large Junco counts from 1996 – 1998.

While declines in the Dark-eyed Junco, House Finch, Western Scrub Jay, Steller's Jay, Morning Dove, Fox Sparrow and Pine Siskin populations are continuing, it appears that the same limiting factor is at work against the House Sparrow population. In many of my graphs the House Sparrow population rises and falls the same years other species are rising and falling. If the data supported my hypothesis I would expect to see the House Sparrow population numbers steadily rising while at the same time the population numbers of other species would have been steadily falling. The only data I observed that seem to support my hypothesis is for the Dark-eyed Junco and Fox Sparrow. Both of these species seem to slightly jump up when the House Sparrow population dips. And both species have slightly but steadily declined over the last couple of years as the House Sparrow population slightly increased. But for the greater bird populations visiting our feeders I must reject my hypothesis that, "If House Sparrows are competing with other bird species for available habitat resources, then over time I will observe

an increase in the House Sparrow population and a decrease in the populations of other bird species visiting my feeders.” Something else is clearly influencing the bird population fluctuations and downward trends that I and my students have noticed over the years, with possible exception to the Dark-eyed Junco and Fox Sparrow populations.

Uncontrolled variables that may have influenced the outcome of my data include inconsistencies in the time or duration spent each time data was collected, inconsistencies in the number of days spent collecting data from school year to school year, and variations in local weather from year to year. It would be interesting to go back and compare my bird observation data with the before mentioned data collection inconsistencies to see if there is a significant relationship.

My thoughts now turn back to the insights of my students, Kristina and Nick, and how they concluded that all the development around our school had been responsible for the changes we were observing in bird populations visiting our feeders. House Sparrows are clearly attracted to human-built landscapes and flourish in these types of environments. I am wondering if the House Sparrow isn't like the canary in the coal mine, serving as an indicator to let us know when something has gone wrong, when we humans have gone too far in changing the lay of the land and upset the fragile balance that supports species diversity. According to the Handbook of Bird Biology, “Loss of required habitat is by far the single biggest factor causing population declines.”(*Handbook of bird biology*, 2004, pp. 10-59) While the House Sparrow may be causing trouble for some species it appears that habitat loss is a far greater culprit in the population declines we have observed. The House Sparrow is not necessarily the villain in this story but rather the messenger that arrives to tell us to pay attention. I believe further research should be conducted to determine whether the presence of House Sparrows could be used as an indicator for determining the loss of habitat.

Table 1

Bird Species	Total Bird Watching Days													Total Birds
	12	25	24	30	30	35	18	11	21	13	23	13		
Bird Species	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008		
Bushlitt	30	4	15	0	20	45	20	22	6	3	19	36		
Chickadee, Black-capped	3	0	5	4	6	5	4	3	4	3	2	4		
Chickadee, Chestnut-backed	3	3	4	5	4	4	4	5	4	3	2	4		
Creepers, Brown	0	0	0	0	3	0	0	0	0	0	1	0		
Crow, American	0	0	0	0	0	0	0	0	0	0	0	1		
Dove, Mourning	5	26	3	6	6	2	7	2	6	1	2	1		
Duck, Mallard	0	0	0	0	0	2	2	0	2	2	0	0		
Duck, House	7	13	6	7	8	9	10	7	3	7	6	2		
Finch, Purple	1	0	0	0	0	0	0	0	0	0	0	0		
Flicker, Northern (Red-shafted)	3	0	1	1	2	2	1	1	0	0	2	0		
Goldfinch, American	0	0	0	0	0	0	0	2	0	0	0	0		
Goldfinch, Lesser	0	0	0	0	0	0	0	2	0	0	0	0		
Hawk, Cooper's	0	1	0	1	1	1	1	1	0	0	0	1		
Hawk, Red Tailed	0	0	1	0	0	0	0	0	0	0	0	0		
Jay, Scrub (Western)	2	4	5	2	3	2	1	1	2	2	1	2		
Jay, Stellers	6	5	6	2	3	3	6	2	5	2	3	3		
Junco, Dark-eyed	56	60	60	31	32	22	16	30	15	20	17	11		
Kinglet, Golden-crowned	0	0	0	0	0	1	0	0	0	0	0	0		
Kinglet, Rudy-crowned	0	0	0	0	0	3	2	0	1	1	1	1		
Nuthatch, Red-breasted	2	2	2	3	3	2	2	2	2	1	2	2		
Robin, American	1	2	0	1	2	3	2	1	1	1	3	0		
Siskin, Pine	0	1	1	2	18	15	20	2	3	0	6	3		
Sparrow, Fox	8	3	3	2	5	3	2	3	3	2	1	1		
Sparrow, Golden-crowned	2	5	5	4	4	4	2	1	2	2	3	4		
Sparrow, House	0	0	0	18	60	41	30	25	0	26	27	26		
Sparrow, Lincoln's	0	0	0	0	0	1	0	0	0	0	0	0		
Sparrow, Song	4	4	5	3	6	5	5	5	7	6	4	4		
Sparrow, White-crowned	0	0	0	0	0	0	0	0	0	2	0	0		
Sparrow, White-throated	0	1	0	0	0	1	0	0	0	1	2	0		
Starling, European	2	4	6	4	15	3	7	4	3	2	1	3		
Thrush, Varied	1	0	1	1	1	1	0	1	4	1	3	5		
Towhee, Spotted (Rufous-sided)	6	4	4	5	5	5	4	6	4	4	6	2		
Warbler, Townsend's	0	0	2	1	2	2	1	0	0	2	1	3		
Warbler, Yellow-rumped (Audubon's)	0	0	0	0	0	2	1	0	0	0	1	3		
Woodpecker, Downy	2	1	3	2	2	2	1	1	2	2	0	2		
Woodpecker, Pileated	0	0	0	0	0	0	0	0	0	0	0	1		
Wren, Bewick's	2	2	1	2	2	2	2	2	0	0	0	1		
Total Birds	146	147	139	107	217	193	153	132	115	131	121	127	Total Birds	
Total Species	20	20	21	22	26	29	25	25	21	25	26	26	Total Species	

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Alfred A. Knopf, Inc.

Appendix 2 (Data Tables by School Year)

Project Feeder Watch 1996-1997 ~ The Bird Blind at Downy Creek

Date	Bird Species	Total Days=12										Greatest Number Seen	Bird Species
		Jan. 14-15	Jan. 27-28	Feb. 10-11	Feb. 26-27	Mar. 12-13	Mar. 20-21						
	Bushitt		30									30	Bushitt
	Chickadee, Black-capped	3	3	2	3	3	3	3	3	3	3	3	Chickadee, Black-capped
	Chickadee, Chestnut-backed	2	3	3	2	2	2	2	2	2	2	3	Chickadee, Chestnut-backed
	Dove, Mourning			2	2	2	2	5	5	5	5	5	Dove, Mourning
	Finch, House	6	4	4	4	7	5	5	7	7	7	7	Finch, House
	Finch, Purple										1	1	Finch, Purple
	Flicker, Northern (Red-shafted)							3			3	3	Flicker, Northern (Red-shafted)
	Hawk, Cooper's												Hawk, Cooper's
	Jay, Scrub	2	1	1	1	1	1	1	1	1	1	2	Jay, Scrub
	Jay, Steller's	4	2	3	3	3	6	6	4	4	6	6	Jay, Steller's
	Junco, Dark-eyed	22	56	41	42	40	20	20	20	20	56	56	Junco, Dark-eyed
	Nuthatch, Red-breasted	2	2	2	1	2	1	1	1	1	2	2	Nuthatch, Red-breasted
	Robin, American				1	1					1	1	Robin, American
	Siskin, Pine												Siskin, Pine
	Sparrow, Fox	8	2	2	3	2	1	2	1	1	8	8	Sparrow, Fox
	Sparrow, Golden-crowned	2	1		1	1					2	2	Sparrow, Golden-crowned
	Sparrow, House												Sparrow, House
	Sparrow, Song	3	4	4	3	3	2	4	2	2	4	4	Sparrow, Song
	Sparrow, White-crowned												Sparrow, White-crowned
	Sparrow, White-throated												Sparrow, White-throated
	Starling, European	2	1	1	2	2	1	2	2	2	2	2	Starling, European
	Thrush, Varied												Thrush, Varied
	Towhee, Spotted (Rufous-sided)	4	4	2	4	6	4	6	4	4	6	6	Towhee, Spotted (Rufous-sided)
	Woodpecker, Downy	1	1	2	2	1	1	1	1	1	2	2	Woodpecker, Downy
	Wren, Bewick's	1	1	2	1	1					2	2	Wren, Bewick's
Total Birds		62	115	71	78	109	58	146	Total Birds				
Total Species		14	15	14	16	19	18	20	Total Species				

Project FeederWatch 1997-1998 ~ The Bird Blind at Downy Creek

Date	11/17/1997	11/18/1997	11/25/1997	12/1/1997	12/2/1997	12/3/1997	12/4/1997	12/11/1997	12/15/1997	12/16/1997	12/17/1997	12/18/1997
Bird Species												
Bushiti												
Chickadee, Black-capped	2	2	2	2	2	2	2	2	3	3	2	2
Chickadee, Chestnut-backed							1	1				
Dove, Mourning	26	15	2	11	9	15	13	6	16	1	8	2
Finch, House		6	5	7	5	5	5	4	2		4	13
Finch, Purple												
Flicker, Northern (Red-shafted)	1			1		1	1	1		1		
Hawk, Cooper's												
Jay, Scrub						1	1					
Jay, Steller's		1	1			3	1	3	2	1	1	
Junco, Dark-eyed	12	17	20	40	50	35	60	22	7	30	17	31
Nuthatch, Red-breasted	1	1	1	1		1	1	1	1	1	1	1
Robin, American												
Siskin, Pine												
Sparrow, Fox	2	2	2	2	2	2	1	2	1	2	1	3
Sparrow, Golden-crowned		2	4	2	2	3	5	4	2	2	2	1
Sparrow, House												
Sparrow, Song	1		1	3	2	2	2	3	1	2	4	1
Sparrow, White-crowned												
Sparrow, White-throated							1				1	
Starling, European			1	1	1	1					1	
Thrush, Varied												
Towhee, Spotted (Rufous-sided)	2	3	3	3	1	3	3	3	2	3	2	3
Woodpecker, Downy			1	1	1	1	1	1	1	1	1	
Wren, Bewick's	1	1		1	1	1	1	1	1	1	1	1
Total Birds	48	50	43	76	74	77	99	52	40	50	44	58

Total Days=25																																																																	
	1/5/1998	1/6/1998	1/7/1998	1/8/1998	1/22/1998	2/2/1998	2/3/1998	2/4/1998	2/18/1998	2/19/1998	2/27/1998	3/5/1998	3/16/1998																																																				
	38	62	65	67	38	30	63	33	6	48	41	56	15	147																																																			
	Total Birds																																																																
20	1	52	2	34	20	20	28	18	2	20	15	25	6	60																																																			
1	1	1	2	2	1	1	1	1	1	2	2	2	2	2																																																			
1	2	2	2	2	2	1	3	1	1	1	2	1	1	1																																																			
2	2	1	4	3	2	1	5	1	2	2	4	2	5	3																																																			
1	2	2	2	2	2	1	3	1	1	2	2	1	1	1																																																			
3	3	5	7	7	3	1	10	4	2	4	3	2	1	13																																																			
2	3	1	4	4	2	2	2	2	3	2	2	2	1	4																																																			
2	1	2	2	2	2	1	2	2	2	2	3	3	1	3																																																			
1/5/1998	1/6/1998	1/7/1998	1/8/1998	1/22/1998	2/2/1998	2/3/1998	2/4/1998	2/18/1998	2/19/1998	2/27/1998	3/5/1998	3/16/1998																																																					
<table border="1"> <thead> <tr> <th>Greatest Number seen</th> <th>Bird Species</th> </tr> </thead> <tbody> <tr><td>4</td><td>Bushy</td></tr> <tr><td>3</td><td>Chickadee, Black-capped</td></tr> <tr><td>26</td><td>Chickadee, Chestnut-backed</td></tr> <tr><td>13</td><td>Dove, Mourning</td></tr> <tr><td>2</td><td>Finch, House</td></tr> <tr><td>2</td><td>Finch, Purple</td></tr> <tr><td>2</td><td>Flicker, Northern (Red-shafted)</td></tr> <tr><td>1</td><td>Hawk, Cooper's</td></tr> <tr><td>4</td><td>Jay, Scrub</td></tr> <tr><td>5</td><td>Jay, Steller's</td></tr> <tr><td>6</td><td>Junco, Dark-eyed</td></tr> <tr><td>2</td><td>Nuthatch, Red-breasted</td></tr> <tr><td>2</td><td>Robin, American</td></tr> <tr><td>1</td><td>Siskin, Pine</td></tr> <tr><td>3</td><td>Sparrow, Fox</td></tr> <tr><td>5</td><td>Sparrow, Golden-crowned</td></tr> <tr><td>2</td><td>Sparrow, House</td></tr> <tr><td>4</td><td>Sparrow, Song</td></tr> <tr><td>1</td><td>Sparrow, White-crowned</td></tr> <tr><td>4</td><td>Sparrow, White-throated</td></tr> <tr><td>4</td><td>Starling, European</td></tr> <tr><td>4</td><td>Thrush, Varied</td></tr> <tr><td>4</td><td>Towhee, Spotted (Rufous-sided)</td></tr> <tr><td>1</td><td>Woodpecker, Downy</td></tr> <tr><td>2</td><td>Wren, Bewick's</td></tr> </tbody> </table>														Greatest Number seen	Bird Species	4	Bushy	3	Chickadee, Black-capped	26	Chickadee, Chestnut-backed	13	Dove, Mourning	2	Finch, House	2	Finch, Purple	2	Flicker, Northern (Red-shafted)	1	Hawk, Cooper's	4	Jay, Scrub	5	Jay, Steller's	6	Junco, Dark-eyed	2	Nuthatch, Red-breasted	2	Robin, American	1	Siskin, Pine	3	Sparrow, Fox	5	Sparrow, Golden-crowned	2	Sparrow, House	4	Sparrow, Song	1	Sparrow, White-crowned	4	Sparrow, White-throated	4	Starling, European	4	Thrush, Varied	4	Towhee, Spotted (Rufous-sided)	1	Woodpecker, Downy	2	Wren, Bewick's
Greatest Number seen	Bird Species																																																																
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Project FeederWatch 1998-1999 ~ The Bird Blind at Downy Creek

Weather	11/24/1998	12/3/1998	12/14/1998	12/15/1998	12/16/1998	1/5/1999	1/6/1999	1/11/1999	1/12/1999	1/13/1999	1/14/1999	1/19/1999
Low Temperature C	10	8	9	7	3	1	3	1	3	7	9	10
Barometric Pressure	29.9	29.95	30.43	30.45	30.39	30.34	30.2	29.88	30.1	30.18	29.95	29.69
Precipitation cm	0	1.8	0	0	0	0	0	1	0.5	0.2	0.5	2
Bird Species												
Bushiti												
Chickadee, Black-capped	1	1	1	2	1	1	1	1	1	1	1	1
Chickadee, Chestnut-backed	1	1	1	2	1	2		1	1	1	2	2
Dove, Mourning		1			2							
Finch, House				5	2		3	2	4	5	6	
Finch, Purple												
Flicker, Northern (Red-shafted)				1								
Hawk, Cooper's												
Hawk, Red Tailed						1						
Jay, Scrub	5	1	2	2	3	1	2	2	5	2	2	2
Jay, Steller's	5	1	1	3	6	2	2	2	1	2		2
Junco, Dark-eyed	30	20	26	30	30	50	25	20	31	30	50	60
Nuthatch, Red-breasted	1	1			1	1		2	1			
Robin, American												
Siskin, Pine					1							
Sparrow, Fox		1	2	2	2	3	2	1	2			2
Sparrow, Golden-crowned	2		5	2	3	2	2	3	3	2	1	2
Sparrow, House												
Sparrow, Song	1	2	2	2	4	4	3	1	4	2	1	3
Sparrow, White-crowned												
Sparrow, White-throated												
Starling, European	2		1	1	1	2	1	6	3			1
Thrush, Varied												
Towhee, Spotted (Rufous-sided)	1		1	2	3	2	3	2	3	4	2	2
Warbler, Townsend's												
Woodpecker, Downy	1			1	1	1	3	1	1	3	2	1
Wren, Bewick's												1
Total Birds	50	28	44	55	61	72	45	44	60	52	62	76
Total Species	11	8	11	13	15	13	10	13	13	10	6	10

	1/22/1999	2/1/1999	2/4/1999	2/5/1999	2/8/1999	2/9/1999	2/11/1999	2/19/1999	3/1/1999	3/2/1999	3/3/1999	3/4/1999	Total Days=24	
8	8	3	4	4	4	7	4	9	7	6	7	8	15	Low Temperature C
29.95	30.34	29.81	29.84	29.97	29.84	30.29	30.24	30.24	29.88	29.85	30.14	0.2	5	Barometric Pressure
2.5	0.5	2	0.2	2	0.2	0.1	1	3	0.5	1.7	0.2	7	4	Precipitation cm
2	5	4	3	2	3	2	2	2	1	1	1	2	5	Bird Species
2	4	2	2	1	1	2	3	2	1	1	1	2	4	Bushiti
1	1	3	3	15	2	15	2	2	3	3	1	2	6	Chickadee, Black-capped
													3	Chickadee, Chestnut-backed
													3	Dove, Mourning
													6	Finch, House
													1	Finch, Purple
													1	Flicker, Northern (Red-shafted)
													1	Hawk, Cooper's
													5	Hawk, Red Tailed
1	1	4	3	2	2	3	2	2	2	6	20	15	6	Jay, Scrub
3	42	20	30	34	20	29	20	22	40	20	15	60	6	Jay, Steller's
32	2												2	Junco, Dark-eyed
													2	Nuthatch, Red-breasted
													1	Robin, American
1	1	1	2	2	1	1	1	3	2	2	1	1	1	Siskin, Pine
3	2	1	2	2	2	2	3	2	2	2	1	2	3	Sparrow, Fox
5	2	1	2	2	2	2	3	2	2	1	2	5	5	Sparrow, Golden-crowned
3	2	2	4	4	3	2	1	5	4	3	1	5	5	Sparrow, House
1	3	1	1	1	3	1	1	1	5	1	1	6	6	Sparrow, Song
1	3	1	1	1	1	1	1	1	1	1	1	6	6	Sparrow, White-crowned
2	1	2	2	2	2	2	3	3	2	2	2	4	4	Sparrow, White-throated
1	2	2	2	2	2	2	1	1	2	2	2	4	4	Starling, European
1	2	1	1	1	1	1	1	1	1	1	1	1	1	Thrush, Varied
													4	Towhee, Spotted (Rufous-sided)
													2	Warbler, Townsend's
													3	Woodpecker, Downy
													1	Wren, Bewick's
57	68	47	68	52	44	64	36	42	76	33	33	139	139	Total Birds
13	13	15	14	10	14	14	11	10	17	10	12	21	21	Total Species

Project FeederWatch 1999-2000 ~ The Bird Blind at Downy Creek

Date	11/22/1999	11/29/1999	11/30/1999	12/1/1999	12/2/1999	12/3/1999	12/13/1999	12/14/1999	1/3/2000	1/4/2000	1/5/2000	1/6/2000	1/10/2000	1/11/2000	1/12/2000	1/13/2000	1/19
Time	9:34	1:19	1:20	1:23	10:01	9:40	1:25	9:44	1:23	1:14	1:24	1:18	1:17	1:15	9:34	1:19	
Humidity	64.2	42.4	37.6	69	50.3	82.7	90.1	53.3	6.5	100	8	57.7	54.9	78.7	78.4	70.8	
Temperature C	7.1	12.2	12.3	8	7.1	4	4.9	5.2	6.5	9.5	8	1.4	3.1	1.6	0.9	4.7	
Barometric Pressure	102.45	100.99	101.31	102.13	101.51	103.3	102.4	102.28	102.51	102.51	102.63	100.69	100.69	100.31	101.52	101.53	
Wind Direction	S	W	E	SSE	SW	NW	SE	SSE	SSW	SSW	SSW	SSW	ESE	SE	SSE	SW	
Wind Velocity kmph	10.6	4.2	4.2	13.4	9.9	0	7.4	17.6	17.6	17.6	0	6.4	0	6.4	25.4	0	
Precipitation cm	0	0	0.08	0	1.42	0	0.46	0.3	1.09	0	0	0	0.46	0.43	0.53	0.53	
Bird Species																	
Bushitt																	
Chickadee, Black-capped	2	2	1	1	2	2	3	1	2	2	2	1	2	2	1	2	
Chickadee, Chestnut-backed		1		2	4	5	2	2									
Dove, Mourning	1		1			6											
Finch, House	2	3	2	1	4	7	6	3		2	3	1					
Finch, Purple																	
Flicker, Northern (Red-shafted)																	
Hawk, Cooper's																	
Hawk, Red Tailed																	
Jay, Scrub	1		1		2	2	2										
Jay, Steller's																	
Junco, Dark-eyed	20	15	12	30	15	30	22	20	15	15	7	22	31	8	5	5	
Nuthatch, Red-breasted	2	1	1	1	2	2	2	1	2	2	1	1	1	1		3	
Robin, American																	
Siskin, Pine		2	1							2							
Sparrow, Fox		1		1	1	2	1	1	1	1	1	1	2	1	1		
Sparrow, Golden-crowned	1	1		2	3	3	1	1	3	3	1	1	2	1	1		
Sparrow, House	2	3		1	2	2	2	3	2	2	2	2	4	4	4	1	
Sparrow, Song																	
Sparrow, White-crowned	1	2	2	2	2	2	3	3	2	2	3	2	3	2	2		
Sparrow, White-throated																	
Starling, European																	
Thrush, Varied																	
Towhee, Spotted (Rufous-sided)	1	2		2	4	3	1	4	3	3	5	4	4	1	1	1	
Warbler, Townsend's																	
Woodpecker, Downy		2															
Wren, Bewick's			1	1	1	1	2				1	1	1				
Total Birds	33	35	23	44	41	67	54	40	2	34	34	29	52	22	7	14	
Total Species	10	12	10	11	12	13	16	11	1	10	13	7	11	10	3	6	

Date	1/26/2000	1/27/2000	1/31/2000	2/1/2000	2/2/2000	2/18/2000	2/25/2000	2/28/2000	2/29/2000	3/1/2000	3/2/2000	3/3/2000	3/15/2000
9:30	10:41	9:40	1:15	1:16	9:45	9:24	1:54	1:17	1:12	1:12	9:36	9:38	9:35
71.1	98.9	98.7	50.3	51.2	64	87.6	86.4	54.3	50.6	48.6	67.2	69.4	61.8
0.51	1.3	-1	7	10.2	5.8	0.5	5.4	7.7	8.6	7.6	7	4.6	3.1
101.27	102.75	103.29	101.61	101.71	102.88	102.82	101.49	101.46	101.46	102.02	101.96	102.25	102.35
SSE	WNW	WNW	SW	SSW	SW	WSW	ENE	SE	SSW	E	ESE	E	WWSW
12.7	0	0	0	17.3	0	0	0	9.9	12.7	8.8	4.9	4.2	0
0.51	0	0	0	1.02	0.13	0	0.13	6.48	0.64	0	0	0	0

Total Days=30

Greatest Number Seen

4	Chickadee, Black-capped
5	Chickadee, Chestnut-backed
6	Dove, Mourning
7	Finch, House
	Finch, Purple
1	Flicker, Northern (Red-shafted)
1	Hawk, Cooper's
2	Hawk, Red Tailed
2	Jay, Scrub
2	Jay, Steller's
2	Junco, Dark-eyed
31	Nuthatch, Red-breasted
3	Robin, American
1	Siskin, Pine
2	Sparrow, Fox
4	Sparrow, Golden-crowned
2	Sparrow, House
18	Sparrow, Song
3	Sparrow, White-crowned
	Sparrow, White-throated
4	Starling, European
1	Thrush, Varied
1	Towhee, Spotted (Rufous-sided)
5	Warbler, Townsend's
1	Woodpecker, Downy
2	Wren, Bewick's
2	

28	62	48	43	47	40	51	14	35	5	28	42	31	18	107	Total Birds
12	12	13	12	9	12	15	7	10	4	10	10	12	9	22	Total Species

Date	Time	Temperature C	Humidity %	Barometric Pressure mbar	Wind Direction	Wind Velocity kph	Wind Chill C	Heat Index C	Dew Point C	Wet Bulb C	Bird Species	Number Seen
1/23/2001	1:30-2pm	7.2	61.3%	1013.76	Falling	5.6%	4.2	0	0.33	0	ENE	0
1/24/2001	9-2pm	3.6	98.3%	1018.53	Rising	12.2%	4.9	3.6	3.3	3.3	SE	18
1/25/2001	9-2pm	6.3	70.2%	1021.19	Falling	4.7%	4.2	6	1.1	3.9	NNE	9
1/31/2001	10-3pm	8	79.1%	1037.9	Falling	13.7%	3.5	8	4.6	6.3	W	18
2/1/2001	10-2:30 pm	10.1	63.5%	1033.36	Falling	10.0%	2.5	10.1	10.1	7	ENE	2
2/7/2001	9:30-11pm	4.9	67.9%	102.52	Falling	68.1%	0	4.9	N/A	2.6	ESE	1
2/8/2001	9-11 pm	2.6	73.8%	101.83	Falling	71.8%	7.8	1.3	-1.6	0.09	SSE	2
2/14/2001	10-2:30 pm	12.8	39.3%	1024.61	Falling	16.0%	0.4	12.8	-0.7	6.7	W/SW	2
2/15/2001	10-2:30 pm	8.2	85.4%	1022.98	Falling	7.6%	8.8	5.3	5.9	7	S	2
2/26/2001	2-3:2:30 pm	10.7	44.2%	103.33	Falling	34.3%	6	10.7	-1	5.5	ENE	2
2/27/2001	2-2:30 pm	13.5	24.1%	103.13	Falling	29.7%	10.2	11.4	-6.6	5.5	NW	17
2/28/2001	10-2:30 pm	11	35.1%	102.48	Falling	1310.0%	0	11	-3.9	4.8	SSW	11
3/1/2001	10-2:30 pm	6.2	93.3%	101.7	Falling	0.0%	10.2	3.2	5.2	5.7	S	2
3/5/2001	1am-2:30pm	15.8	44.8%	102.51	Falling	30.4%	4.2	15.8	3.9	9.7	NNE	8
3/6/2001	2:30-5 pm	18	39.0%	1018	Steady	39.0%	6	18	4	11	NE	8
3/7/2001	12:30-1 pm	18.2	46.6%	1027.33	Falling	39.3%	4.6	18.2	6.6	11.8	SW	8
Total Days=30												
Total Birds												
Total Species												

Greatest Number Seen	Bird Species
20	Bush-tit
6	Chickadee, Black-capped
4	Chickadee, Chestnut-backed
3	Creepers, Brown
6	Dove, Mourning
8	Finch, House
2	Finch, Purple
3	Flicker, Northern (Red-shafted)
2	Goldfinch, American
1	Hawk, Cooper's
3	Hawk, Red Tailed
3	Jay, Scrid
3	Jay, Steller's
32	Junco, Dark-eyed
3	Nuthatch, Red-breasted
2	Robin, American
18	Siskin, Pine
5	Sparrow, Fox
4	Sparrow, Golden-crowned
60	Sparrow, House
6	Sparrow, Song
1	Sparrow, White-crowned
1	Sparrow, White-throated
15	Starling, European
1	Thrush, Varied
5	Towhee, Spotted (Rufous-sided)
2	Warbler, Townsend's
1	Warbler, Yellow-rumped (Audubon's)
2	Woodpecker, Downy
2	Wren, Bewick's

Classroom FeederWatch 2001-2002 - The Bird Blind at Dowry Creek

Date	11/13/2001	11/14/2001	11/15/2001	11/26/2001	11/27/2001	11/29/2001	11/30/2001	12/4/2001	12/5/2001	12/6/2001	12/19/2001	1/8/2002	1/15/2002	1/17/2002	1/22/2002	1/23/2002	1/24/2002
Time	9:00am	9:00am	9am-2pm	1-2pm	9:00am	9:00am	11-12pm	9:00am	9:00am	9:00am	10-2pm	10-2pm	1-2pm	10-12pm	9:00am	9:00am	9:00am
Temperature C	10	15	12	6	4	5	6	3	1	7	6	12	5	4	2	2	6
Humidity %	87%	88%	95%	85%	94%	83%	99%	99%	100%	85%	93%	79%	72%	84%	100%	100%	87%
Barometric Pressure mbar	1070	1011	1011	1028	1029	1004	1008	1016	1014	1018	1012	1021	1029	1030	1018	1027	1025
Barometric Pressure R/S/F	Steady	Rising	Rising	Rising	Falling	Rising	Falling	Steady	Rising	Steady	Falling	Steady	Steady	Steady	Rising	Rising	Falling
Light %	1%	1%	4%	5%	1%	6%	2%	1%	1%	3%	4%	62%	52%	16%	0%	0%	0%
Wind Velocity kph	6	20	7	0	0	9	10	10	2	5	10	6	3	0	3	0	10
Wind Direction	E	S	SE	WSW	NW	SW	S	S	S	S	NNW	S	E	SSW	WSW	SE	SSE
Precipitation cm	0.03	0.01	0.99	0	0	0.05	0.03	0.03	0.03	0.03	0	0.01	0	0	0.18	0.03	0
Wind Chill C	10	9	12	6	4	3	6	-2	1	7	6	11	5	4	2	2	2
Dew Point C	8	13	11	4	3	3	6	3	1	5	6	6	11	11	11	11	11
Wet Bulb C	9	14	11	5	3	4	6	3	1	6	6	11	3	3	2	2	2
Cloud Cover %	100%	100%	100%	100%	100%	60%	100%	100%	100%	75%	100%	75%	20%	100%	80%	100%	100%
Bird Species																	
Bushhit																	
Chickadee, Black-capped	1		2	1	1	2	2	2	4	2	5	4	16	16	10	17	29
Chickadee, Chestnut-backed				2		1	1	1	2			1	2	4	2	2	1
Dove, Mourning				1	1				2								
Duck, Mallard																	
Finch, House			1	1		1	1	9	7	3		4	1	1			
Finch, Purple																	
Flicker, Northern (Red-shafted)						2	1		1			1	1	1		1	
Hawk, Cooper's																	
Hawk, Red Tailed																	
Jay, Scrub (Western)	2		2	1	1	1		2	2		2	2	1	2	2	2	
Jay, Steller's																	
Junco, Dark-eyed	5	1	2	22	19	5	12	6	6	14	9	16	2	7	15	6	
Kinglet, Golden-crowned																	
Kinglet, Rudy-crowned																	
Nuthatch, Red-breasted	1		1	1	1			2	2	1			1	1	1	1	
Robin, American																	
Siskin, Pine		1		1	1		1	1	11	1	1	1	1	1	1	1	
Sparrow, Fox				3	2		1	1	1	1	1	1	3	1	1	1	
Sparrow, Golden-crowned			1		1	1		1	1	1	1	1	1	2	2	2	
Sparrow, House		11	41	6	17		10	6	9	20	13	9	4	1	14	11	3
Sparrow, Lincoln																	
Sparrow, Song	2	3	3	3	3	1	1	3	3	2	4	4	2	4	5	3	
Sparrow, White-crowned																	
Sparrow, White-throated																	
Starling, European					1	1			1					1	2		
Thrush, Varied																	
Towhee, Spotted (Rufous-sided)	1	3	2	1	2	1	1	3	3	3	2	5	2	2	3	1	1
Warbler, Townsends															1	1	
Warbler, Yellow-rumped (Audubon's)																	
Woodpecker, Downy						1		1	1			1					
Wren, Bewick's	1		1	1				1	1			1		1			1
Total Birds	13	19	56	44	52	15	29	36	54	47	40	50	36	51	62	46	34
Total Species	7	5	10	13	15	9	8	12	15	9	11	13	12	19	15	12	4

		1/25/2002		1/28/2002		1/29/2002		1/30/2002		2/11/2002		2/19/2002		2/20/2002		2/21/2002		2/26/2002		2/27/2002		2/28/2002		3/6/2002		3/6/2002		3/7/2002		3/8/2002		3/12/2002		3/14/2002		3/15/2002		
1-2pm	6	4	1	5	7	11	10	8	14	12	12	2	2	3	3	8	3	3	10	10	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	92%	77%	98%	78%	56%	63%	61%	86%	30%	75%	87%	90%	100%	83%	71%	95%	95%	77%	93%																			
	1008	1019	1027	1025	1038	1015	1026	1024	1032	1031	1027	1015	1007	1012	1024	1017	1027	1015	1027																			
Falling	Steady	Steady	Rising	Falling	Falling	Rising	Steady	Steady	Falling	Steady	Rising	Falling	Falling	Falling	Steady	Rising	Falling	Falling																				
	20%	18%	13%	22%	55%	55%	61%	23%	62%	37%	34%	2%	1%	49%	43%	2%	13%	18%	15%																			
	18	11	2	8	8	10	5	14	6	0	3	6	0	26	6	13	3	3	10																			
SSE	NW	NW	NW	SE	NNE	W	SE	SE	SW	SW	SSW	S	NNW	S	SW	SW	SW	SW	SW																			
	1.4	0	0	0.05	0.03	0.3	0	0.13	0	0	0	0.03	1.09	0.03	0.03	0.46	0.46	0.03																				
	-1	1	0	2	-1	4	4	12	-6	9	3	6	3	0	0	0	3	3																				
	5	0	0	2	4	7	7	13	5	2	3	3	3	2	2	3	3	3																				
	6	2	1	3	4	7	7	13	5	2	3	3	3	2	2	3	3	3																				
	100%	75%	100%	100%	25%	50%	20%	100%	0%	0%	100%	100%	95%	95%	100%	95%	100%	100%																				
	45	25	25	38	2	13	12	15	4	1	9	11	15	16	34	1	2	3																				
	2	1	2	2	3	1	2	1	1	2	2	1	1	2	4	1	1	3																				
	3	1	3	1	1	2	1	1	2	1	1	5	1	2	2	1	1	1																				
	1	1	2	1	1	1	1	2	1	1	1	2	2	1	2	1	1	2																				
	3	3	15	20	7	12	11	21	11	9	10	16	12	16	15	20	20	20																				
	1	2	3	2	1	1	1	2	2	3	3	2	2	3	3	1	1	1																				
	2	2	2	2	1	1	2	2	2	2	2	2	3	3	3	3	3	3																				
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1																				
	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	2	2	1	3	2	1	3	1	1	1	1	1	1	1	1																				
	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2																				
	1	1	1	1																																		

Classroom Feeder Watch 2002-2003 ~ The Bird Blind at Downy Creek

Date	11/20/2002	11/25/2002	12/4/2002	12/9/2002	12/16/2002	12/19/2002	1/8/2003	1/9/2003	1/13/2003	1/28/2003
Time	9am-2pm	9am-2pm	9am-2pm	9am-2pm	9am-2pm	9am-2pm	2:00pm	9am-2pm	9am-10am	10am-2pm
Temperature C	8	2	3	3	3	7	9	6	8	6
Humidity %	100%	90%	100%	89%	96%	60%	51%	59%	98%	100%
Barometric Pressure mbar	1025	1035	1024	1017	992	1007	1018	1018	1022	1025
Barometric Pressure R/S/F	Falling	Steady	Steady	Falling	Rising	Falling	Falling	Rising	Steady	Falling
Light %	3%	29%	1%	2%	1%	0%	41%	12%	2%	11%
Wind Velocity kph	5	6	0	0	10	11	2	20	0	1
Wind Direction	SSW	NW	W	SW	SE	E	NNE	NE	SW	N
Precipitation cm	0	0	0.38	0	1.98	0	0	0	0.03	0
Wind Chill C	8	2	4	1	4	1	8	1	8	6
Dew Point C	8	1	4	4	6	4	-1	-2	8	6
Wet Bulb C	8	2	4	2	6	4	5	3	8	6
Cloud Cover %	25%	0%	100%	100%	100%	100%	0%	80%	100%	100%
Bird Species										
Bushy	1	3	9	11	12	12	3	2	20	
Chickadee, Black-capped	4	4	1	4	2	3	4	2	4	
Chickadee, Chestnut-backed		2	3	3	3	4	4	4	2	
Dove, Mourning						7	1	2		
Duck, Mallard										2
Finch, House								3		
Finch, Purple										
Flicker, Northern (Red-shafted)		1								1
Hawk, Cooper's	1									
Hawk, Red Tailed		1	3	1	1	1	1	1	1	
Jay, Scrub (Western)	1	1	3	15	12	10	6	16	8	1
Jay, Steller's	3	3	13	15	12	10	6	16	8	1
Junco, Dark-eyed										
Kinglet, Golden-crowned	1	2	2	1	1	1	1	1	1	
Kinglet, Ruby-crowned	1	1	2	2	2	1	1	2		
Nuthatch, Red-breasted										
Robin, American										
Siskin, Pine		1						3		
Sparrow, Fox	1		1		2	1	1	1		
Sparrow, Golden-crowned					2			1		
Sparrow, House	13	15	18	17	20	26	10	26	14	
Sparrow, Lincoln										
Sparrow, Song	2	5	4	3	4	3	4	3	2	1
Sparrow, White-crowned										
Sparrow, White-throated										
Starling, European										
Thrush, Varied								7	4	
Towhee, Spotted (Rufous-sided)	1	2	3	2	2	4	1	3	2	4
Warbler, Townsend's	1				1			1	1	
Warbler, Yellow-rumped (Audubon's)										
Woodpecker, Downy		1	1	1	1	1	1	1	1	
Wren, Bewick's	1	1	1	1	1	1	1	1	1	
Total Birds	31	43	61	61	69	64	29	77	63	8
Total Species	13	15	13	12	16	14	9	17	13	5

1/31/2003	2/5/2003	2/10/2003	2/19/2003	2/20/2003	2/26/2003	3/6/2003	3/10/2003
10am-2pm	9am-2pm	9am-2pm	9am-2pm	2:00pm	9am-10am	9am-2pm	9am-2pm
12	2	6	7	7	1	7	11
99%	99%	96%	99%	96%	79%	82%	85%
1016	1027	1026	1017	1019	1012	1013	1020
Rising	Falling	Falling	Steady	Steady	Steady	Falling	Falling
2%	32%	5%	5%	14%	15%	6%	28%
8	0	1	0	23	0	0	6
S	NE	W	E	S	SW	W	S
3.33	0	0	0.23	0	0	0.05	0
10	2	6	7	-1	1	7	11
12	2	4	7	7	-2	4	9
12	2	5	7	7	0	6	9
100%	0%	100%	100%	0%	100%	100%	99%

Total Days = 18

Time	Temperature C	Humidity %	Barometric Pressure mbar	Barometric Pressure R/S/F	Light %	Wind Velocity kph	Wind Direction	Precipitation cm	Wind Chill C	Dew Point C	Wet Bulb C	Cloud Cover %	Bird Species	Greatest Number Seen
													Bushitit	20
													Chickadee, Black-capped	4
													Chickadee, Chestnut-backed	4
													Dove, Mourning	7
													Duck, Mallard	2
													Finch, House	10
													Finch, Purple	1
													Flicker, Northern (Red-shafted)	1
													Hawk, Cooper's	1
													Hawk, Red Tailed	1
													Jay, Scrub	1
													Jay, Steller's	6
													Junco, Dark-eyed	16
													Kinglet, Golden-crowned	2
													Kinglet, Ruby-crowned	2
													Nuthatch, Red-breasted	2
													Robin, American	2
													Siskin, Pine	20
													Sparrow, Fox	2
													Sparrow, Golden-crowned	2
													Sparrow, House	30
													Sparrow, Lincoln	5
													Sparrow, Song	3
													Sparrow, White-crowned	3
													Sparrow, White-throated	3
													Starling, European	7
													Thrush, Varied	4
													Towhee, Spotted (Rufous-sided)	1
													Warbler, Townsend's	1
													Warbler, Yellow-rumped (Audubon's)	1
													Woodpecker, Downy	1
													Wren, Bewick's	2

76	44	55	63	61	57	52	54	153	Total Birds
16	16	13	16	9	19	19	18	25	Total Species

Classroom FeederWatch 2003-2004 ~ The Bird Blind at Downy Creek

Date	Total Days =11										
	11/20/2003	11/25/2003	12/9/2003	12/18/2003	1/5/2004	1/13/2004	1/15/2004	2/3/2004	2/12/2004	2/20/2004	3/2/2004
Time	11am-2pm	11am-2pm	11am-2pm	11am-2pm	1050-1105a	11am-2pm	11am-2pm	11am-2pm	11am-2pm	11a-12pm	11am-2pm
Temperature C°	4	6	6	10	-7	6	5	7	10	7	12
Humidity %	97%	98%	69%	54%	59%	90%	100%	69%	43%	74%	54%
Barometric Pressure mbar	1017	1005	1015	1022	1033	1023	1020	1012	1021	1020	1023
Barometric Pressure R/S/F	S	S	F	F	F	F	F	R	F	F	S
Light %	23%	12%	5%	36%	19%	24%	3%	48%	53%	49%	59%
Wind Velocity kph	12	7	10	14	10	0	0	2	7	6	5
Wind Direction	S	S	E	E	N	SW	NE	ESE	NNE	W	WNW
Precipitation cm	0.15	0.69	0.03	0	Snow	0.03	0.03	0	0	0	0
Wind Chill C°	-5	6	6	3	-14	6	6	7	4	5	12
Dew Point C°	4	6	6	1	-8	4	6	2	-2	3	7
Wet Bulb C°	4	6	6	6	-8	6	6	5	5	5	7
Cloud Cover %	80%	100%	100%	0%	100%	95%	100%	50%	0%	1%	0%
Bird Species	Number/Seen										
Bushit				22		19	14	21	10	6	4
Chickadee, Black-capped	3	3	3	3	1	2	1	2	3	1	2
Chickadee, Chestnut-backed	5	4	3	1	2	2		2	1	2	1
Dove, Mourning		1	2	1	1				1	1	2
Duck, Mallard						1	2	5	2		2
Finch, House		1		1	7	1					
Finch, Purple											
Flicker, Northern (Red-striated)			1	1							1
Goldfinch, American			2				2		2		2
Goldfinch, Lesser											1
Hawk, Cooper's				1							
Hawk, Red Tailed											
Jay, Scrub (Western)	1				1			1			1
Jay, Steller's	2							1			2
Junco, Dark-eyed	13	8	12	6	30	3	4	9	10	5	10
Kinglet, Golden-crowned						1	1	2	1	1	2
Kinglet, Ruby-crowned						1	1	2	1	1	2
Nuthatch, Red-breasted		2			1			2	1	1	1
Robin, American					1			2	1	1	2
Siskin, Pine					1			2	1	2	2
Sparrow, Fox	2		1		3	3	3	2	1	2	2
Sparrow, Golden-crowned		1			3	3	2	2	1	2	3
Sparrow, House	16	20	7	2	3	3	25	6	6	1	15
Sparrow, Lincoln											
Sparrow, Song	2	4	2	2	5		4	3	2	1	1
Sparrow, White-crowned											
Sparrow, White-throated			1			1		2	1	2	1
Starling, European			4		2			2	1	2	4
Thrush, Varied								1	1	1	1
Towhee, Spotted (Rufous-sided)	3	4	3	1	6		3	2	2	2	5
Warbler, Townsend's								1	1		6
Warbler, Yellow-rumped (Audubon's)								1	1		1
Woodpecker, Downy								1	1		1
Wren, Bewick's	1	1	1	1	1	1	2	1	1	1	2
Total Birds	48	53	43	41	62	34	61	63	44	26	50
Total Species	10	12	13	11	13	10	11	17	15	13	15

Date	Total Days =11										
	11/20/2003	11/25/2003	12/9/2003	12/18/2003	1/5/2004	1/13/2004	1/15/2004	2/3/2004	2/12/2004	2/20/2004	3/2/2004
Time	11am-2pm	11am-2pm	11am-2pm	11am-2pm	1050-1105a	11am-2pm	11am-2pm	11am-2pm	11am-2pm	11a-12pm	11am-2pm
Temperature C	4	6	6	10	-7	6	5	7	10	7	12
Humidity %	97%	98%	69%	54%	59%	90%	100%	69%	43%	74%	54%
Barometric Pressure mbar	1017	1005	1015	1022	1033	1023	1020	1012	1021	1020	1023
Barometric Pressure R/S/F	S	S	F	F	F	F	F	R	F	F	S
Light %	23%	12%	5%	36%	19%	24%	3%	48%	53%	49%	59%
Wind Velocity kph	12	7	10	14	10	0	0	2	7	6	5
Wind Direction	S	S	E	E	N	SW	NE	ESE	NNE	W	WNW
Precipitation cm	0.15	0.69	0.03	0	Snow	0.03	0.03	0	0	0	0
Wind Chill C°	-5	6	6	3	-14	6	6	7	4	5	12
Dew Point C°	4	6	6	1	-8	4	6	2	-2	3	7
Wet Bulb C°	4	6	6	6	-8	6	6	5	5	5	7
Cloud Cover %	80%	100%	100%	0%	100%	95%	100%	50%	0%	1%	0%
Bird Species	Number/Seen										
Bushit				22		19	14	21	10	6	4
Chickadee, Black-capped	3	3	3	3	1	2	1	2	3	1	2
Chickadee, Chestnut-backed	5	4	3	1	2	2		2	1	2	1
Dove, Mourning		1	2	1	1				1	1	2
Duck, Mallard						1	2	5	2		2
Finch, House		1		1	7	1					
Finch, Purple											
Flicker, Northern (Red-striated)			1	1							1
Goldfinch, American			2				2		2		2
Goldfinch, Lesser											1
Hawk, Cooper's				1							
Hawk, Red Tailed											
Jay, Scrub	1				1			1			1
Jay, Steller's	2							1			2
Junco, Dark-eyed	13	8	12	6	30	3	4	9	10	5	10
Kinglet, Golden-crowned						1	1	2	1	1	2
Kinglet, Ruby-crowned						1	1	2	1	1	2
Nuthatch, Red-breasted		2			1			2	1	1	1
Robin, American					1			2	1	1	2
Siskin, Pine					1			2	1	2	2
Sparrow, Fox	2		1		3	3	3	2	1	2	3
Sparrow, Golden-crowned		1			3	3	2	2	1	2	3
Sparrow, House	16	20	7	2	3	3	25	6	6	1	15
Sparrow, Lincoln											
Sparrow, Song	2	4	2	2	5		4	3	2	1	1
Sparrow, White-crowned											
Sparrow, White-throated			1			1		2	1	2	1
Starling, European			4		2			2	1	2	4
Thrush, Varied								1	1	1	1
Towhee, Spotted (Rufous-sided)	3	4	3	1	6		3	2	2	2	5
Warbler, Townsend's								1	1		6
Warbler, Yellow-rumped (Audubon's)								1	1		1
Woodpecker, Downy								1	1		1
Wren, Bewick's	1	1	1	1	1	1	2	1	1	1	2
Total Birds	48	53	43	41	62	34	61	63	44	26	50
Total Species	10	12	13	11	13	10	11	17	15	13	15

Classroom FeederWatch 2004-2005 ~ The Bird Blind at Downy Creek

Date	11/18/2004	11/22/2004	12/1/2004	12/7/2004	12/8/2004	12/15/2004	12/16/2004	1/5/2005	1/6/2005	1/12/2005	1/13/2005	1/19/2005
Time	3-3:15pm	9am-3pm	9am-12pm	3-3:15pm	11-11:45am	8am-3pm	2:30-3pm	9:30-3pm	3-3:30pm	9:45-3pm	3-3:15pm	10-10:15am
Temperature C°	10	6	3	7	11	6	9	-2	5	4	7	13
Humidity %	72%	89%	100%	95%	74%	100%	73%	73%	93%	96%	76%	86%
Barometric Pressure mbar	1030	1022	1031	998	997	1033	1031	1025	1009	1023	1026	1022
Barometric Pressure R/S/F	R	R	R	F	R	S	S	S	F	R	S	R
Light %	2%	16%	5%	1%	10%	2%	33%	29%	0%	4%	8%	19%
Wind Velocity kph	6	0	0	11	13	1	3	3	12	6	0	0
Wind Direction	NW	S	ENE	SE	SSW	SSW	NNW	W	SW	SSW	NW	S
Precipitation cm	0.46	0	0.05	0.56	0.58	0.03	0	0	0	Tr	0	0
Wind Chill C°	8	6	3	3	7	6	9	-2	3	4	7	13
Dew Point C°	6	4	3	7	7	6	4	-6	3	3	3	11
Wet Bulb C°	8	4	3	7	9	6	7	-3	4	3	3	12
Cloud Cover %	missing	75%	100%	100%	75%	100%	50%	0%	100%	100%	100%	80%
Bird Species												
Bushitt						20						
Chickadee, Black-capped	2	5	6		4	3	2	2	2	4		3
Chickadee, Chestnut-backed		3	3			4		3				
Dove, Mourning												
Duck, Mallard		2				2						
Finch, House			1			1		3			1	1
Finch, Purple												
Flicker, Northern (Red-streaked)												
Goldfinch, American												
Goldfinch, Lesser												
Hawk, Cooper's												
Hawk, Red Tailed												
Jay, Scrub (Western)												
Jay, Steller's		1				1		1			2	
Junco, Dark-eyed	3	10	4	1	15	10	3	7	3	9	9	12
Kinglet, Golden-crowned												
Kinglet, Ruby-crowned		1	1	1	2	2	1	1	1	1	2	
Nuthatch, Red-breasted												
Robin, American												
Siskin, Pine												
Sparrow, Fox	1	1	2		1	2	3	3	1	3	1	1
Sparrow, Golden-crowned												
Sparrow, House		4	13		1	12	8	20	20	15	8	1
Sparrow, Lincoln												
Sparrow, Song	3	2	3	1	3	3	2	5	2	5	3	2
Sparrow, White-crowned												
Sparrow, White-throated												
Starling, European					1			3		1		
Thrush, Varied												
Towhee, Spotted (Rufous-sided)	1	1	4	1	4	2	2	2	2	1		1
Warbler, Townsends												
Warbler, Yellow-rumped (Audubon's)												
Woodpecker, Downy	1		2		1	2	2	2		2		
Wren, Bewick's			1			1						
Total Birds	10	32	41	4	33	68	26	59	29	44	27	19
Total Species	5	12	12	4	10	16	10	14	6	11	7	7

House Sparrow Displacement

1/26/2005	1/27/2005	2/2/2005	2/3/2005	2/9/2005	2/10/2005	2/14/2005	2/28/2005	3/1/2005	
10am-3pm	3-3:15pm	9am-2pm	3-3:15pm	9-4:5-3pm	3-3:15pm	10am-3pm	9am-11am	2-2:20pm	
8	14	0	10	0	14	0	10	17	
84%	58%	100%	73%	100%	37%	100%	73%	40%	
1009	1010	1032	1022	1024	1018	1025	1012	1010	
S	F	S	F	S	F	S	R	F	
7%	15%	2%	31%	23%	39%	11%	18%	29%	
3	2	3	0	0	5	0	24	2	
W	SE	N	S	S	SE	S	S	SW	
Tr	0.05	0.03	0	0	0	0	0.13	0	
8	14	0	10	0	13	0	2	17	
6	6	1	6	0	0	-1	6	3	
7	9	1	8	0	7	-1	8	10	
100%	98%	100%	90%	100%	0%	100%	60%	25%	
9	2	3	22	3	2	6	9	2	
1	1	2	1	2		4	2	2	
		2	6	3		2	1	2	
		2	1	1		3	2		
1		10	2	4		7	3	1	
		1	2	1		1	1		
		1	1	1		1	1		
2		2	1	2		3	2		
1		1	2	5		10	3	2	
		5	3	2		7	3	4	
4	3	5	2	4	2	7	3	4	
2		2	3	2	1	3	3	1	
1		2	1	1		2	2		
		2	1	1		1	2		
23	3	38	47	30	10	53	31	12	
9	1	13	13	13	4	16	11	6	
Total Birds									115
Total Species									21

Total Days = 21

Time	Temperature C°	Humidity %	Barometric Pressure mbar	Barometric Pressure R/S/F	Light %	Wind Velocity kph	Wind Direction	Precipitation cm	Wind Chill C°	Dew Point C°	Wet Bulb C°	Cloud Cover %																						
Bird Species																																		
Number Seen	22	6	4	6	2	3	0	0	0	0	2	5																						
Greatest	Bushitt	Chickadee, Black-capped	Chickadee, Chestnut-backed	Dove, Mourning	Duck, Mallard	Finch, House	Finch, Purple	Flicker, Northern (Red-shafted)	Goldfinch, American	Goldfinch, Lesser	Hawk, Cooper's	Hawk, Red Tailed	Jay, Scrub	Jay, Steller's	Junco, Dark-eyed	Kinglet, Golden-crowned	Kinglet, Ruby-crowned	Nuthatch, Red-breasted	Robin, American	Siskin, Pine	Sparrow, Fox	Sparrow, Golden-crowned	Sparrow, House	Sparrow, Lincoln	Sparrow, Song	Sparrow, White-crowned	Sparrow, White-throated	Starling, European	Thrush, Varied	Towhee, Spotted (Rufous-sided)	Warbler, Townsend's	Warbler, Yellow-rumped (Audubon's)	Woodpecker, Downy	Wren, Bewick's

Classroom BirdWatch 2005-2006 ~ The Bird Blind at Downy Creek

Date	11/29/2005	12/1/2005	12/14/2005	12/15/2005	1/10/2006	1/17/2006	1/27/2006	2/2/2006	2/6/2006	2/8/2006	2/14/2006	2/22/2006	2/24/2006	Total Days =
Time	10:35-2:17	10:42-2:30	11:20-1:28	11:03-2:37	11:15-2:45	10:44-2:22	11:38-2:20	10:45-2:03	11:12-2:48	2:40-3:02	10:59-2:37	10:49-2:30	10:58-1:53	13
Temperature C°	3°	3°	2°	1°	12°	7°	6°	10°	6°	11°	4°	8°	4°	
Humidity %	98%	98%	86%	63%	86%	98%	95%	91%	77%	82%	86%	77%	72%	
Barometric Pressure mbar	1012	998.14	1026	1022	1008	1013	1019	1015	1024	1028	1023	1028	1027	
Barometric Pressure R/S/F	R	F	F	F	F	F	R	S	R	S	F	S	F	
Light %	0%	2%	13%	13%	1%	1%	12%	6%	12%	13%	14%	6%	20%	
Wind Velocity kph	18	1	6	3	8	3	9	8	1	7	5	4	5	
Wind Direction	SW	SE	NE	E	SSW	S	SW	S	N	E	SW	SW	NW	
Precipitation cm	0.38	0.18	0	0	1.14	0.69	0.08	0.53	0	0.1	0.08	0	0	
Wind Chill C°	-1°	3°	-4°	1°	10°	6°	6°	7°	6°	11°	4°	8°	-3°	
Dew Point C°	3°	2°	-1°	-6°	10°	7°	4°	8°	2°	8°	2°	4°	-1°	
Wet Bulb C°	3°	3°	1°	-7°	11°	7°	5°	9°	4°	9°	3°	7°	2°	
Cloud Cover %	100%	100%	0%	0%	100%	100%	90%	100%	0%	75%	100%	100%	10%	
Bird Species														Greatest Number Seen
Bushitt														35
Chickadee, Black-capped	2	2		33	35	1	26	8	20	17	5	1	1	3
Chickadee, Chestnut-backed	1		1	2	1	3	2	3	3	1	1	1	1	3
Creepers, Brown														0
Dove, Mourning							1				1			1
Duck, Mallard	2	2												2
Finch, House				2		2		7	2	7		1		7
Finch, Purple														0
Flicker, Northern (Red-shafted)														0
Goldfinch, American														0
Goldfinch, Lesser														0
Hawk, Cooper's														0
Hawk, Red Tailed														0
Jay, Scrub (Western)	1	2	2	2				6	6	15	5	2	2	2
Jay, Steller's	1	1	2	2				6	6	15	5	2	2	2
Junco, Dark-eyed	10	12	20	8	2	4		6	6	15	5	5	5	20
Kinglet, Golden-crowned						1		1	1	1	1	1	1	0
Kinglet, Rudy-crowned								1	1	1	1	1	1	1
Nuthatch, Red-breasted						1		1	1	1	1	1	1	1
Robin, American														1
Siskin, Pine														0
Sparrow, Fox	1	1	1	2		2		2	2	1	1	1	1	2
Sparrow, Golden-crowned	2	2	3	7	3	2		2	2	2	4	6	1	2
Sparrow, House	10	26	3	7	3	2		2	2	2	4	6	1	26
Sparrow, Lincoln														0
Sparrow, Song	4	3	3	6	2	3	3	3	2	4	3	3	3	6
Sparrow, White-throated														2
Starling, European	1	1	2	1	1	1		1	1	1	1	1	1	2
Thrush, Varied														1
Towhee, Spotted (rufous-sided)	4	2	2	4	4	2		2	2	3	2	2	2	4
Warbler, Townsend's														1
Warbler, Yellow-rumped (Audubon's)	1	1	1	1	1	1	1	1	1	2	1	1	1	2
Woodpecker, Downy	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Wren, Bewick's														2
Total Birds	43	68	38	75	44	24	34	38	42	58	27	26	38	131
Total Species	15	14	11	16	6	13	6	12	12	15	12	12	20	25

BirdSleuth 2006-2007 ~ The Bird Blind at Downy Creek

Date	Nov. 16, 2006	Nov. 20, 2006	Nov. 28, 2006	Dec. 4, 2006	Dec. 7, 2006	Dec. 11, 2006	Dec. 12, 2006	Dec. 13, 2006	Jan. 3, 2007	Jan. 4, 2007	Jan. 5, 2007	Jan. 10, 2007	Jan. 11, 2007
Duration (minutes)	11:25am	10:50am	10:50am	10:14am	10:48am	10:27am	10:34am	9:37am	2:11pm	2:08pm	11:58am	10:44am	10:35am
Number of People	3	21	22	17	19	3	46	41	43	23	16	16	16
Temperature C°	1	8	11	1	3	9	12	11	11	10	17	20	24
Humidity %	92%	81%	81%	77%	79%	99%	79%	65%	81%	82%	86%	99%	82%
Barometric Pressure mbar	1019	1018	1018	1022	1023	1010	1012	1013	1009	1022	1032	1018	1024
Barometric Pressure R/S/F	S	S	S	R	F	F	R	R	R	S	S	F	S
Light %	8%	8%	8%	3%	7%	2%	5%	2%	4%	6%	3%	6%	14%
Wind Velocity kph	1	7	7	3	4	12	10	11	4	2	16	5	13
Wind Direction	NW	SE	SE	NW	E	S	E	S	S	E	SE	SW	NNW
Precipitation cm	0	0.03	0.03	0.03	0	1.09	0	0.41	1.04	0.69	0.03	0.08	0.03
Wind Chill C°	8	10	10	1	3	9	10	11	10	7	5	1	-4
Dew Point C°	7	7	7	0	2	9	7	6	7	10	-1	1	-2
Wet Bulb C°	8	9	9	1	2	9	9	8	8	7	2	1	-1
Cloud Cover %	50%	75%	100%	100%	75%	100%	75%	100%	75%	80%	100%	90%	10%
Bird Species													
Bushhit													
Chickadee, Black-capped	2	2	3	3	1	1	2	2	1	1	5	19	10
Chickadee, Chestnut-backed													2
Creepie, Brown													
Dove, Mourning													
Duck, Mallard				1		1	2	2				6	1
Finch, House							5						
Finch, Purple													
Flicker, Northern (Red-shafted)													
Goldfinch, American													
Goldfinch, Lesser													
Hawk, Cooper's													
Hawk, Red Tailed													
Jay, Scrub (Western)													
Jay, Steller's		1	1	1									
Junco, Dark-eyed		1	1	10		17	10	5	12	4	4	1	2
Kinglet, Golden-crowned													3
Kinglet, Ruby-crowned													9
Nuthatch, Red-breasted			1	1		1							1
Robin, American													
Siskin, Pine													
Sparrow, Fox				1		1	1	1				1	1
Sparrow, Golden-crowned				1		1	1	1				1	3
Sparrow, House		6	24	3	6	23	25	27	7		1	10	12
Sparrow, Lincoln													
Sparrow, Song		1	3	1	2	1	2	1				3	4
Sparrow, White-crowned													
Sparrow, White-throated													
Starling, European													
Thrush, Varied													
Towhee, Spotted (rufous-sided)				6		1	3	1	1			1	2
Warbler, Townsend's													3
Warbler, Yellow-rumped (Audubon's)													1
Woodpecker, Downy		2											1
Wren, Bewick's	1		1	1	1	1	2	1	1	1	1	1	1
Total Birds	3	15	54	5	32	39	51	50	14	10	15	53	56
Total Species	2	8	13	3	8	7	13	11	5	7	9	15	17

Birdsleuth 2007-2008 ~ The Bird Blind at Downy Creek

Nov. 19, 2007 Nov. 26, 2007 Nov. 28, 2007 Dec. 6, 2007 Jan. 2, 2008 Jan. 8, 2008 Jan. 15, 2008 Jan. 31, 2008 Feb. 4, 2008 Feb. 6, 2008 Feb. 12, 2008 Feb. 15, 2008 Feb. 22, 2008 Total Days = 13

Time	11:05am	11:15am	11:04am	10:58am	11:12am	10:17am	10:40am	11:20am	11:00am	10:25am	11:20am	11:58am	2:03pm	Greatest Number Seen
Duration (minutes)	28	35	38	30	36	53	53	15	40	50	55	50	17	36
Number of People	33	40	40	38	21	41	41	39	44	31	38	40	20	4
Temperature C°	7	1	3	8	3	4	10	5	2	4	6	9	7	0
Humidity %	93%	89%	99%	98%	100%	100%	100%	89%	95%	94%	94%	64%	78%	0
Barometric Pressure mbar	1021	1022	1031	1010	1016	1004	1039	1007	1027	1027	1025	1025	1023	0
Barometric Pressure R/S/F	R	F	F	S	F	S	R	R	S	R	R	F	R	0
Light %	24%	4%	4%	3%	0%	0%	18%	17%	20%	19%	3%	58%	71%	0
Wind Velocity kph	4	0	2	4	0	1	2	12	2	9	1	4	4	0
Wind Direction	S	SSE	WNW	E	NE	NE	E	S	NW	S	S	W	NNW	0
Precipitation cm	0.03	0	0.13	0.25	0.13	1.17	0.03	0.69	0	0.08	0.03	0	0	0
Wind Chill C°	7	1	3	8	3	4	1	2	2	2	6	8	7	0
Dew Point C°	6	-1	3	7	3	4	1	3	2	2	2	4	3	6
Wet Bulb C°	6	0	3	8	3	4	1	4	2	3	5	6	8	0
Cloud Cover %	100%	100%	100%	100%	100%	100%	95%	50%	100%	100%	100%	75%	50%	0
Bird Species														
Bushitt	2	1	4	3	3	3	1	2	24	2	36	17	2	4
Chickadee, Black-capped	4	4	3	3	1	1	1	1	1	2	2	2	2	4
Chickadee, Chestnut-backed														0
Creepers, Brown														0
Crow, American	1							1	1					1
Dove, Mourning														0
Duck, Mallard														0
Finch, House									2	1	1		2	0
Finch, Purple														0
Flicker, Northern (Red-shafted)		2		1									2	0
Goldfinch, American														0
Goldfinch, Lesser		1							1				0	0
Hawk, Cooper's														1
Hawk, Red Tailed														0
Jay, Scrub (Western)	1	1	1	1	2	8	1	3	1	2	11	8	3	11
Jay, Steller's	1	3	7	7	4	2	1	1	1	1	2	2	2	2
Junco, Dark-eyed	4	3	1	1	4	8	8	3	7	5	5	11	8	3
Kinglet, Golden-crowned														0
Kinglet, Ruby-crowned														1
Nuthatch, Red-breasted	1	1	2	1	1	1	1	1	1	1	1	1	1	2
Robin, American														0
Siskin, Pine			1							3	3	1	1	3
Sparrow, Fox					1	1	1	1	1	1	1	1	1	1
Sparrow, Golden-crowned	1	1	1	1	1	1	2	2	2	4	3	1	1	4
Sparrow, House	4	20	19	10	10	4	12	11	10	15	26	13	2	26
Sparrow, Lincoln														0
Sparrow, Song	2	4	2	1	2	3	3	1	2	3	2	4	2	4
Sparrow, White-crowned														0
Sparrow, White-throated														0
Starling, European									1	1	1	1	3	3
Thrush, Varied														2
Towhee, Spotted (Rufous-sided)														5
Warbler, Townsend's	1	2	1	1	4	3	1	2	3	2	5	2	3	3
Warbler, Yellow-rumped (Audubon's)														2
Woodpecker, Downy				1				2	1	1	2	1	1	2
Woodpecker, Pileated														2
Wren, Bewick's		1				1	1		1	1	1	1	1	1
Total Birds	22	40	43	3	26	29	32	24	65	49	101	60	15	127
Total Species	11	12	12	3	7	10	11	9	19	18	17	16	7	26